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VOCATIONALIZING EDUCATION IN GHANA: A STUDY OF GHANA'S ATTEMPTS TO VOCATIONALIZE THE SCHOOL CURRICULUM, WITH SPECIAL REFERENCE TO THE JUNIOR SECONDARY SCHOOL PROGRAM

by

CLEMENTE ABROKWA

©

A THESIS

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IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTOR OF PHILOSOPHY

IN

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OF Doctor of Philosophy

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DEDICATION

This thesis is dedicated to several people who have been instrumental in my educational career.

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ABSTRACT

This work examines efforts made in Ghana to vocationalize the curriculum of its schools, with a special assessment of its latest attempt in this area--the Junior Secondary School Program. As in many other developing nations, Ghana has tried to achieve socio-economic development to solve the problem of unemployment among its school-leavers. These goals underlie the efforts to introduce vocational elements in the curriculum of schools in Ghana.

Vocationalization of education was also justified by such educational philosophies as Pragmatism, Populism, and Socialism, which supported the view that the general education of the child should include both academic and vocational courses. This was considered necessary to develop the "all-round" person capable of contributing to the social transformation of the society. Added to this, the Functionalist and the Human Capital theories both had an influence on these curriculum changes. The former posits that vocational education helps to develop and sort individuals for the jobs they can best perform. While the latter claims that this type of education provides the knowledge and skills required for economic development in society.

However, achieving the goals of vocational education has remained elusive, and the "successes" in this area are more a myth rather than reality. The failure of these curriculum changes is due to socio-economic, political and educational problems, prompting critics, including Foster (1966), Bacchus (1986), and others, to argue that without the prior or concurrent introduction

of changes in the socio-economic structure of the developing nations, vocational education will continue to fail.

The findings of this study confirmed the critics' argument.

However, the investigation also suggested an emerging condition which supported the need to look at the issue of vocationalizing education again. It was discovered that the high cost of urban living due to unprecedented inflation rates in the Ghanaian economy had begun to generate interest in vocational training among school graduates seeking alternative sources of income. In other words, despite its failure to achieve previously set goals, vocational education could more likely succeed at the present time because the socio-economic conditions in the country have been changing--providing, however, that it was redefined and given full support by the government, policymakers, and educational authorities.

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DEFINITION OF TERMS

Vocationalization:

This term means referes to the attempts to provide vocational courses (including technical, vocational, pre-vocational and business), along side the regular academic courses in the primary and secondary schools.

Vocational Programs:

Such programs are directed at training students to acquire specific skills for specific jobs. They include courses such as catering, hotel management, farming, office practice, and business studies.

Pre-Vocational Programs:

Pre-vocational courses are designed to introduce students to various occupational fields by broadening their acquaintance with them. This enables them to make more rational decisions in the choice of their future occupations. Theses programs are directed at giving students some "hands on" experience and theoretical grasp of such vocations as agriculture, fishing, woodwork, metalwork, electrical studies, carpentry, welding, vulvanizing, tie and dye, tailoring and business integrated into the academic curriculum.

Diversified Curricula Programs:

Simply put, diversified curriculum programs have been mainly those directed at providing students with pre-vocational activities in school. That is, diersifying the school curriculum often means the inclusion of pre-vocational courses aimed at introducing students to fields of study other than the traditional academic arts and science subjects.

School-leavers:

This is synonymous with school graduates.

Post-Secondary Teachers:

These are secondary school graduates who have received at least two years of teacher education from established teacher training colleges.

Development:

In this study the term development is used in it broader sense to include increased economic growth. A more equitable distribution of resources in society, the creation of structures for enhancing self-sustaining economic growth, the reduction of poverty within the the population, and minimization of dependence on major industrial states (Samoff, 1974).

ABBREVIATIONS TO BE USED

LDCs	Less Developed Countries
JSSP	Junior Secondary School Program
MOE	Ministry of Education
GES	Ghana Education Service
CRDD	Curriculum Research and Development Division
NLC	National Liberation Council
NTTC	National Teacher Training Council
NPCISR	National Planning Committee for the Implementation of School Reforms.
PNDC	Provisional National Defence Council
WAEC	West African Examinations Council

CHAPTER I

VOCATIONALIZATION IN GHANA: AN OVERVIEW

Introduction

> we have evaded the real issues, in education, conveniently terming the manifested problems as over-educated, the unemployed educated, the diploma disease, and so forth. We have never run short of impressive catch-words. This does not help us much. We need instead to address ourselves to the real fundamental issues in social, economic and political development in order to locate answers for education.
>
> Joseph Rugumyamheto (Education
> Minister, Tanzania, 1984).

The purpose of this study is to review and analyze the efforts made in Ghana to vocationalize the curriculum of its schools, with a special assessment of the country's latest effort in this area through the Junior Secondary School Program (JSSP). The argument advanced in this study is that vocational education programs in Ghana, as in many of the less developed countries (LDCs), have failed--and are likely to continue failing--unless the problems associated with vocationalization are better understood and the factors which influence its success or failure are adequately addressed and overcome.

The continued failure of vocational education in Ghana to this time can generally be attributed to the following reasons: (1) the curriculum changes introduced are insufficient and ineffective to achieve the range of goals set for these programs; (2) the authorities have believed that vocationalization itself could effect the desired socio-economic changes; (3) the theoretical and philosophical reasons supporting vocational education fail to consider the controversy surrounding the relationship between education and development, as well as its role in the job market; (4) the cultural conception (i.e. value and status) and the socio-economic structural reward system (i.e. income and social mobility) associated with vocational education by parents, students, teachers, education authorities, and decision-makers are low; and (5) frequently inadequate provision is made for the implementation of these programs.

The JSS program, which was implemented in Ghana in 1974 and which was directed at making education more useful to students, is one example of how these problems continue to thwart efforts to vocationalize education in that country.

In spite of the history of failure of these projects, authorities continue to maintain the opinion that vocational education is a more relevant alternative to the academic curriculum and see it as being a potential socio-economic change agent. Based on this unfounded assumption, new vocational programs are introduced soon after the collapse of existing ones, without any attempt to learn why previous efforts have failed, thus creating the foundation for future repeated errors and the inevitable disintegration of subsequent programs.

The study will begin by providing an overview of vocationalization in Africa, particularly in the education system of Ghana, known as the Gold Coast in colonial times.

Aims of Colonial Education

European colonization of Africa (as well as other areas) during the mid nineteenth century had two main objectives: (1) the exploitation of the wealth of the colonies; and (2) the provision for the settlement of the excess population of Europe (Bacchus, 1989). Initially, from the point of view of economic exploitation, the colonies were regarded simply as sources of raw materials, but later they were considered valuable for trading purposes. Hence, the ability of the country to produce goods for and purchase products from the metropole became an important concern. To solve this problem, efforts were made at getting the colonized to grow cash crops or to work as laborers in the monetized sectors of the economy, since this would allow them to earn the incomes required to purchase imported goods from the metrople (Bacchus,1989).

With regard to government the major problem which confronted the colonizers was the maintenance of social order and stability necessary for effective economic exploitation (Bacchus, 1989). Different strategies were used to achieve this goal including the introduction of indirect rule by the British as, for example, in Northern Nigeria, Ghana and elsewhere in Africa (Bacchus, 1989; Foster, 1965). This gave a facade of power and control to the accepted traditional sources of authority (e.g. the chieftaincy system), while in fact, the real power still rested in the hands of the colonizer.

Another approach was to attempt to "educate" or socialize a few of the local population to accept the colonizers' values, beliefs and assumptions of superiority, and to use some of these educated individuals, both as models for others who were aspiring to improve their conditions of life, and to help with the administration of the colonies by becoming links between the colonizers and the masses (Bacchus, 1989). This, in effect, meant selecting a few Africans to participate in the domination and exploitation of the colonies by developing in them a strong sense of loyalty to their respective metropoles. In other words, the implicit purpose of colonial education in Africa was essentially to teach the local population some skills which would prepare them to occupy, with a certain degree of commitment and contentment, a few positions at the lower levels of the occupational hierarchy within the European controlled sector of these societies (Rodney, 1972; Bacchus, 1989).

The Development of Education

The earliest efforts at providing education in Africa were left largely to the missionaries, who saw Christianity as a key element in producing the type of individuals desired by the colonizers. Their aim was "to produce Christian pupils, diligent, obedient, straightforward, kind and God-fearing" (Bacchus, 1989). The type of education provided was, therefore, not designed to foster confidence, rationality and the pride of being African within the pupils; rather, it was one which sought to instill in them " a sense of deference towards all that was European" (Bacchus, 1989). Since the establishment of schools tended to follow trade and the location of centers of administrative control, this resulted in an unequal distribution in both the provision of educational services and the access to education by various groups in the country. In addition, access to education, including the provision of educational facilities, was greater among ethnic groups living within or in the immediate surroundings of the trade and administrative centers. This trend not only created the rural-urban sectors of the colonial societies, but it also generated the desire among the rural groups to migrate into the urban centers to seek wage employment and a better life.

Another point was that the educational facilities made available through the efforts of the colonial governments were very limited since the authorities wanted to provide just enough education to "keep the colonial system ticking" (Bacchus, 1989).

On the other hand, education was seen by African parents as important for their children if they were to have the chance of a better life in the society. This attitude not only resulted in increased demand for European education, but it also led to overproduction of primary school graduates who could not all be employed in the European sector of the economy because of the limited number of junior positions available in this sector. The result was extensive unemployment among the educated Africans throughout the British colonies in Africa as early as the 1850s

(Foster, 1965). When this became a great concern to the colonial government it initiated a new educational policy aimed at improving the quality of life among the masses, as well as remedying the unemployment problem.

Vocational Education

The colonizers were always aware of the potential danger of the output from schools outstripping the number of available jobs. The authorities therefore decided to integrate the work of the school and the community by introducing agricultural and traditional industrial courses into the school curriculum. It was believed the "superior" knowledge, skills and values which students acquired in these vocational courses would gradually be diffused into the community and, in this way, make these students change agents for community development (Bacchus, 1983). It was also believed that provision of this type of education would lower the occupational aspirations of students to more "realistic" levels. Academic education was therefore designed for the few students selected for public sector jobs. In other words, there was a sharp distinction between the education provided for the masses and that given to those who were being prepared to occupy higher status positions in Ghanaian society. The masses were to be "socialized" to accept their position at the lower echelons of the occupational hierarchy. Schools were to give them the skills, knowledge and values which would not only keep them productively occupied at this level but would also help them accept the inevitability of their position--to which it was often said, "it had pleased God to call them" (Bacchus, 1983).

In the British colonies the first comprehensive curriculum proposals for the colonized were put forward at the invitation of the Colonial Secretary by the Privy Council on January 6, 1847. The work was undertaken by J. P. Kay Shuttleworth. His plan for the "Education of the Colored Races of the British Colonies" had two main objectives: to combine intellectual and industrial instruction, and to ensure that the labor of children contributed toward defraying some part of the expense of their education (Ibid.).

The assumption was that native labor must continue to be made available for the cultivation of the soil. Thus, proponents of this new policy argued that the best system was "combined intellectual and industrial instruction" (Colonial Office, 1847). To this end, gardening and crafts courses were made compulsory at the elementary and secondary schools, while agricultural science was introduced into the teacher training curriculum.

The emphasis on vocational education in schools in British Colonies in Africa was again reinforced in the 1920s following the publication of the Phelps-Stokes Commissions report of 1922 and 1924. The two Commissions, funded by the Phelps Stokes Foundation of the United States, were invited to report on and make recommendations for the development of education in Eastern, Western, Southern and Equatorial Africa (Foster, 1965; Bacchus, 1989). Headed by Thomas Jesse Jones of the Hampton Institute of North America (a well-known educational institution for Negroes), the main task of the Commissions was to relate education to the "needs" of the local communities. Therefore, in addition to agriculture and village crafts, the Commissions recommended the inclusion of health, hygiene and housewifery in the elementary and secondary school curriculum. In the teacher colleges, the Jeanes Teacher Training model was proposed (see chapter two for a description of this model). As in the 1847 educational policy, this was also an attempt to return the majority of the students to the land to contribute to the development of their communities and also to provide a solution to the growing unemployment problem among the educated Africans.

The Phelps Stokes report thus formed the basis of the 1925 Education Policy in British Tropical Africa which stated that:

> Education should be adapted to the mentality, aptitudes, occupations and the traditions of the Africans...,conserving as far as possible all sound and healthy elements in the fabric of their social life....Its aim should be to render the individual more efficient in his or her condition of life, whatever it might be, and to promote the advancement of the community as a whole (Foster, 1965, p. 160).

It was argued that, because the African economy was and would remain agrarian, the type of education provided by the schools should be geared to providing students with skills that would help them to improve the rural sector. Additionally, since about 80% of the students were destined to remain in the rural sector, introduction of agricultural and industrial courses into the school curriculum was perceived as necessary in order to equip these students with new and improved skills that would assist them in transforming rural life (Foster, 1965; Graham, 1971).

Furthermore, since the responsibility for decision making in these communities rested with the adults, the new policy recognized that much of the education given to the young aimed at changing attitudes and beliefs, such as those pertaining to health and hygiene, was likely to be ineffective or to take a long time to produce results since young people had little influence on change. This problem led to the introduction of community/adult education as proposed by the 1944 report on Mass Education in African Society (Bacchus, 1989). The rationale advanced for this approach was that:

> The progress of a backward community will be greater and more rapid if the education of the adults is taken in hand simultaneously with that of the young,...efforts to educate the young are often largely wasted unless a simultaneous effort is made to improve the life of the community as a whole (Bacchus, 1989, p. 7).

In short, it was evident that the aims of the colonial educational policy were compatible with vocationalization of the curriculum in schools.

However, by the end of the first half of the twentieth century (1950s and early 1960s), the various attempts to vocationalize colonial education had failed to achieve their goals and anticipated outcomes. For example, in his "Survey of Education in West Africa," Dr. G. B. Jeffrey criticized the educational systems of these countries:

> for providing too superficial an education...for being too much bound by external examinations, for being too bookish and unpractical; for producing too many clerks and too few farmers...and for utterly failing to stop the drift to towns....(Cited in Bacchus, 1989, p. 7).

These failures were due to several socio-economic and educational (school level) factors. The socio-economic constraints were the students' and parents' attitudes to vocational education, rapid educational expansion in a climate of fairly stagnant economies and inelastic labor markets, urban-rural income differentials, miscalculated assumptions that schools were responsible for solving socio-economic problems, and the lack of full government support and financing.

At the school level, vocational education faced implementation problems related to unclear program definition, ineffective implementation structures and strategies to integrate the academic and vocational curricula, inefficient administrative and management systems, lack of qualified vocational teachers and lack of the required equipment and resources (Foster, 1965; 1966; Graham, 1971; Bacchus, 1986; 1991; Lillis & Hogan, 1983). These problems have long been characteristic of vocationalization efforts in colonial and post-colonial Ghana as well as in other developing countries.

BRIEF HISTORICAL BACKGROUND TO THE PROBLEM IN GHANA

The Gold Coast (Ghana) was a British colony from the mid-nineteenth century until the end of the first half of the twentieth century. The search for raw materials and new trading partners by European colonizers led to their colonizing this particular region of West Africa. Because of their need for literate African interpreters, the British merchant companies (including the Royal African Company) established schools at the British trading posts--the castles--along the coastal belt of the country. Private companies also wanted Africans able to read and write, so that they could serve as soldiers, messengers, gardeners and cooks. At this time, education was for the most part offered to the "mulattoes" (children of European traders by African wives) but not to wholly African pupils (Hilliard, 1957; Foster, 1965; Scanlon, 1966; Graham, 1971; McWilliam & Kwamena-Poh, 1975). Examples of these early schools were the Cape Coast, Anomabu and Accra castle schools. The merchants set up the Mulatto Fund to finance the schools because, until the mid-nineteenth century, all educational and commercial activities in the Gold Coast were the entire responsibility of the merchants and not the British government.

Educational expansion in the Gold Coast occurred with the arrival of the missionaries--the Basel, Wesleyan, Bremen and the

Catholics--in the mid-nineteenth century, by which time the British government had already assumed control of all administrative and commercial activities in the Gold Coast. The defeat of the Ashanti Nation in 1874 marked the beginning of full British colonization of the Gold Coast. The colonial government allowed the mission bodies to be responsible for the development of education in the country, but it also established a few schools of its own. In addition, it offered grants-in-aid to the mission schools which were designated "assisted" schools. The missionary bodies were therefore "free to establish schools wherever they wished" (Stein, 1974). By 1881 there were 139 government and assisted schools in the coastal area. Except for three government schools, all were run by the missions. These schools enrolled just over 5,000 students. By the turn of the century there were still only about 135 government and assisted schools which enrolled about 12,000 pupils. British annexation of the Ashanti Nation in 1874 had led to an increase in the demand for primary education. As a result, a total of about 120 private (unaided) schools, were in operation during this period (Stein, 1974).

After the turn of the century, responding largely to local demand, the missions expanded their educational activities to cover wider areas of the country--particularly the interior. During the 1930s, some schools were established through the initiative of local African rulers, and administered by the Native Authorities (Foster, 1965). By 1951 (when self-government was attained) there were 3,073 schools (including unaided schools) with a total enrollment of 300,705 students (Stein, 1974; Foster, 1965).

The greater demand for European education was due to its 'vocational' nature since it prepared people for work in the lucrative but small exchange sector of the Gold Coast economy. Although the economy was basically agrarian and export-oriented (cash-crops), the colonial government continued to neglect development of the vast agricultural industry to improve both the incomes and general standard of living of the rural peoples. The ability of the few employed educated individuals to purchase imported European goods, such as clothing and textiles, shoes and foods, led the masses to believe that socio-economic mobility in the Gold Coast was highly dependent upon the acquisition of European academic education. In other words, it was clear to the people that the Gold Coast education system paralleled the occupational structure that existed in the exchange sector of the economy (Foster, 1965). Since the establishment of the castle schools, it had become evident that school graduates were recruited into clerical jobs in the European dominated sector of the economy rather than being sent back to the land. The general aspiration of parents, students and communities was therefore to receive academic education in order to secure modern sector employment and escape rural poverty and hard work on the farms.

However, the exchange sector economy of the Gold Coast was not expanding at a rate sufficient to create an adequate number of clerical jobs to absorb the thousands of school graduates each year. Hence, there was extensive unemployment among the few educated Africans as early as the 1850s (Graham, 1971). This problem increased in severity during the first half of the twentieth century and caused the colonial government to search for an alternative "more relevant" educational program that not only would aid in the socio-economic development of the Gold Coast colony but also would reduce growing unemployment among the educated.

Vocational Education in the Gold Coast

Following the recommendations of the Privy Council in 1847 which sought to relate education to the African economy, model farms and trade schools were established in the Gold Coast in an attempt to 'return' students to the land and the community after graduation. The colonial educators had hoped that training in agriculture and crafts, which were the dominant occupations of the local communities, would induce graduates to settle and assume jobs in the rural sector economy. To this end, farming, gardening and crafts were added to the traditional academic curriculum of the elementary school curriculum.

But efforts to introduce vocational programs into the school curriculum in the 1850s failed. This was because the authorities had wrongly assumed that, by providing such courses, students would willingly opt for this type of employment in the rural sector after graduation. They had failed to recognize that the occupational aspirations of the local population were largely to acquire white collar jobs in the modern sector and, escape from the economically unrewarding agriculture and craft occupations of the rural sector. This misconception regarding the people's occupational aspirations, compounded with the lack of rural development, contributed to the failure of vocational education in the schools during this period.

A second attempt was made to "vocationalize" the Gold Coast education system during the first half of the twentieth century, following the publication of the Phelps-Stokes report of 1922. Between 1925-1950 the colonial government introduced various agricultural, technical and handicraft courses into the school curriculum. But by 1951 these attempts also had failed to achieve the desired goals and anticipated outcomes. Once again, this was due to the lack of investigation of the problems which thwarted earlier implementation efforts and those which characterized the new reforms--namely the continued failure to improve the general standard of living and incomes of the rural masses who formed about 90% of the entire population and, the failure to expand jobs in the modern sector.

Summary and Review

Vocational education was introduced into the Gold Coast education system as a socio-economic change-agent and as a solution to the educated unemployment problem. However, the colonial educators failed to provide the means for the general implementation of the new curriculum. Hence, the practical realization of the goals of vocational education remained a failure. They also were incorrect in their assessment of the educational or occupational aspirations of the population. It was assumed that, if the students, especially those in the rural areas, were provided with practical agricultural training and craft skills, they would likely remain or return to the rural traditional crafts. But this did not happen. Because of the growing income differential between white collar and agricultural jobs and the increased amenities available in the cities, many youngsters sought modern sector employment--even if these meant jobs at the lowest level of the occupational hierarchy in the modern sector.

SIGNIFICANCE OF THE STUDY

The significance of this study lies in two main areas.

First, the study will generate some new insights regarding the rationale and goals of vocationalization in a developing country. In particular, the study should also illuminate some of the various socio-economic and educational factors that have impeded vocationalization in the developing countries since colonial times.

Second, the study will demonstrate to the government and educational authorities that: (1) there is a need to re-examine the rationale and goals of vocationalization; and (2) that vocationalization of education in itself is incapable of solving the broad socio-economic and unemployment problems of Ghana and other LDCs. In other words, the study will posit that, unless certain aspects of the country's socio-economic structures are transformed in order to make it possible for students to use the vocational knowledge and skills taught in schools, such vocationalization efforts are meaningless and represent a mis-use of the country's scarce resources.

ORGANIZATION OF THE STUDY

This study is organized in the following manner:

Chapter one presents the purpose and the problem of the study and an overview of vocationalization in Ghana since colonial times.

A detailed review of vocationalization in the country during the colonial period is the focus of chapter two. Included in this chapter is a discussion of the educational proposals made by the Privy Council (1847) and the Advisory Committee of 1923, based on the publication of the Phelps-Stokes Commission's reports of 1922 and 1924.

In chapter three vocationalization in post-Independence Ghana is reviewed, plus the various factors which have influenced this type of education since Independence. The factors presented include educational expansion, the need for development, the international support for vocational education in the 1960s, the support offered by Functionalism and the Human Capital Theory, and the philosophical reasons advanced by Pragmatism, Populism, and Socialism.

Chapter four explores some of the major implementation problems associated with vocationalization.

Chapter five outlines the research strategies that were used in the study.

In chapter six a brief account of the implementation of the JSS program as a pilot project from 1976-1986 will be presented. Its main focus, however, will be to evaluate the aims and objectives or goals of the program.

Chapter seven examines the effectiveness of the JSSP implementation strategy adopted by the Ministry of Education.

The main focus of chapter eight is to evaluate the JSS curriculum, training and supply of JSS teachers, and JSS examination policies.

Chapter nine assesses equipment and resource supplies, the distribution system and financing policies.

The final chapter presents a summary of findings, conclusions and recommendations in relation to the Junior Secondary School program.

CHAPTER II

VOCATIONAL EDUCATION IN COLONIAL GHANA

Introduction

This chapter traces the development of vocational education in Ghana prior to Independence. This includes a review of the traditional Ghanaian education system before colonization, the consequences of educational expansion, and the reasons why vocational education was introduced into the country's education system. Second, it presents and examines the various education policies regarding vocationalization of education in the Gold Coast. The policies to be discussed in detail include (a) the Privy Council Recommendations of 1847, (b) the Phelps-Stokes Report of 1922 and 1924, and (c) the Advisory Committee Report of 1925 and 1935. Finally, an attempt is made to show why these educational reform policies have failed.

THE DEVELOPMENT OF VOCATIONAL EDUCATION IN GHANA PRIOR TO INDEPENDENCE

The Nature and Goals of Ghanaian Traditional Education

Like in other African societies, the pre-colonial form of education in the Gold Coast was informal education by which the main educational agency was the home and to some extent the community.

The most crucial aspect of this education was its "relevance" to the people because of its close links to social life, both in a material and spiritual sense, its collective nature, and its progressive development in conformity with the successive stages of physical, emotional, and mental development of the child (Rodney, 1972). Furthermore, there was no separation of education and economic productive activity, nor was there any division between manual and intellectual education. That is, attention and importance were given equally to both manual (e.g. agriculture) and intellectual (e.g. study of religious and tribal customs) education in the general upbringing of the child.

Second, it was "vocational" in orientation because it prepared individuals for both citizenship and for life. This was noted by a Danish merchant in the mid-1600s who observed that,

> From the age of eight or nine the boys would follow their father to learn some trade and be initiated into the customs and traditions of the tribe or community....the young had to seek information about the past by listening to their elders. The young men especially had to attend sessions of the law courts, to become acquainted with tribal law. (McWilliam & Kwamena-Poh, 1975, p. 2).

The home and community were therefore the school, where parents and elders of the family (extended family) served as teachers in the training of the young for citizenship. It was the duty of all the elders in a family to train its young members to cultivate good character, good health, knowledge of tribal history, beliefs and culture, and training in the dominant occupational practices of the community. These teachings were expected to perpetuate tribal knowledge, skills, values, and beliefs and also to prepare the young to participate fully in social life, thus bringing honor to the entire family. One of the main disciplines taught to both boys and girls by the family was hard work on the farm and respect for manual labor in general, because a successful farmer or a master craftsman was one of the marks of a prosperous family.

The introduction of European formal education under colonial rule was accompanied by a decline of the family as the focal point of educational life of the traditional society in the Gold Coast and the other colonies (Scanlon, 1966; Foster, 1965; Graham, 1971). The young now looked up to the school teachers and school authorities for guidance, knowledge, and the inculcation of foreign values and behavior patterns required by the schools. Family and parental knowledge, and traditional practices became less important in the new society dominated by formal education. Parents themselves were termed "illiterates" by others who had to be educated in the new values in the efforts by the colonizer to build a new and "civilized" society.

Formal education thus contributed to the erosion of traditional authority and power. Family heads and local chiefs now had virtually no power over their educated minority groups. Nana Ofori-Atta, paramount chief of Akim-Abuakwa observed:

> If the educated native is going to be trained for him to look down on, or to tell his parents, relatives or chiefs....'you are not

> as advanced and skilled as I am, you do not know the tricks of the civilized world, you do not deserve the leadership naturally conferred on you'...then I fear our path to civilization will have been badly made (Foster, 1965, p. 142).

The once cherished and long held traditional values of respect for elders and authority and appreciation of local music dance, religion, and law were considered "heathen" values by the zealous missionaries who were eager to instil the principles of Christianity into the colonial peoples through formal education. More important, the boarding school system introduced by the missionaries removed the young generation from contact with the family trade or occupational practice, particularly agriculture. "Vocational" preparation was seen as the responsibility of the school. Individual interests and pursuits replaced the traditionally-oriented drive to work for the common interest and development of the community. This was reflected in attempts made by the educated minority to develop higher occupational aspirations and secure better income for themselves and their children at the expense of the large majority of people who had no access to formal education.

In review, the imposition of European education in Ghana turned the attention of the young and old away from traditional occupations to the search for urban jobs and status in the small emerging modern sector of the economy. Practical or skilled education in agriculture, handicrafts, hunting and fishing was seen as being fit only for illiterate or rural people. In other words, despite its "vocational", social and economic nature, the importance of pre-colonial Ghanaian education was abandoned by both the colonized and the colonizer in favor of the rewards offered by the European education introduced into the country during the mid-nineteenth century.

The Development of Formal Education in Ghana

British colonization of the Gold Coast during the nineteenth century was primarily motivated by the prospects of economic gain, derived from the creation of new markets for British manufactured goods, the security of raw materials to feed British industries, and the prospecting for gold. Britain, as well as other colonial powers such as France and Spain, began its colonizing efforts by introducing into its colonies a new range of economic activities, such as the commercialization of certain agricultural crops for export (eg. cocoa, palm oil and timber), the establishment of mining ventures in areas with valuable mineral resources, and other similar economic activities favorable to the interests of the colonizer (Bacchus, 1986).

These enterprises often required manpower with Western, or European, educational skills and knowledge for their operation (Bacchus, 1986; Graham, 1971). In addition, the colonizers needed educated Africans to serve as interpreters to assist them in their commercial transactions with the local people. Thus it became necessary to introduce a European education system into the colonies.

The purpose of colonial education was three-fold: the creation of a competent artisan class, the diffusion among the masses of education sufficient to enable them to understand the basic elements of the machinery of government, and the creation of a small administrative class (Bray et al., 1986).

In the Gold Coast, the British merchants established schools in the castles along the coastal belt (built earlier by Portuguese and Dutch, to house slaves being sent overseas). These schools catered primarily to the mulattoes admitted children of the few African traders. Hence, the greater portion of the indigenous population in early nineteenth century Gold Coast were never exposed to European education.

Educational Expansion in the Gold Coast: Efforts by the Missionaries

Educational expansion in the Gold Coast, and in other British colonies such as Nigeria, Sierra Leone, Kenya and Uganda, began in the third decade of the nineteenth century with the arrival of the Basel, Wesleyan, Anglican and Bremen missionaries. The models for these education systems were taken from the missionaries' homelands resulting in the importation of non-African ideas to the African continent (Bray et al., 1986). The freedom to establish and manage their own mission schools led these missionaries to place a great emphasis on religious instruction in their newly-devised programs. This not only helped to convert the majority of the Africans to Christianity, but also produced obedient and submissive individuals who were eager to assist the colonizer in the administration of the colony.

By 1881 the Gold Coast had 136 elementary (Mission) schools and only three Government schools in the coastal area. By the turn of the century there were 135 schools, but the enrollment had more than doubled with approximately 12,000 pupils. The vast majority of these students, though, still resided in the coastal areas (Hilliard, 1957; Foster, 1965; Graham, 1971).

Educational activity began to infiltrate the interior of Ghana in the early twentieth century, due to the cultivation of cocoa as a cash crop in this region. In the less-developed and traditionally-oriented Northern Territories of the country, the demand for education remained insignificant (refer to Table I). However, educational expansion in the Gold Coast, as in other British colonies, did not alter the colonial government's policies regarding the provision of education.

As in Britain, education in the colonies was highly decentralized, based upon the concept of formal schooling as a "privilege to be privately acquired, or a duty to be individually performed" (Carnoy, 1974). This policy resulted in the establishment of private schools, aided by the State but relying largely on self-finance through school fees (Carnoy, 1974). The fee requirement seriously limited access, particularly to post-primary education, to the majority of the colonial subjects who were unable to pay these charges. In the Gold Coast, the annual

Table 1
Educational Development in the Various Areas of The Gold Coast, 1919

Area	Population	No. of Schools	Pupils
Coastal Belt (Fanti)	1,143,000	186	25,000
Ashanti	407,000	23	2,600
Northern Territories	527,000	4	225

Source: George (1965), Education in Ghana. (See also Foster [1965]. Education and social change in Ghana.)

fee for the primary level was five shillings (5s.od), while the middle school fees ranged from fifteen to thirty shillings (15-30s), depending on the academic nature of the instructional program offered. These fees continued to be assessed until Independence in 1957 (McWilliam & Kwamena-Poh, 1975; Graham, 1971).

The colonial government's participation in the development of education was therefore minimal, compared to the efforts made by the missions (Assisted Schools). Even by 1951, when self-government was achieved, government schools numbered only 41, while the missions had 625 schools (refer to Table 2).

One of the objectives of restructuring access to education for the masses was to ensure that there were not too many educated individuals seeking the limited number of white collar jobs available on the market. As previously indicated, these were the type of jobs to which those who had been to school aspired. Table 2 also indicates that the demand for European education became more pronounced at the beginning of the twentieth century for two main reasons: (1) formal education offered wage employment opportunities and higher income in the exchange sector of the economy; and (2) it conferred a highly valued social status on the school graduate. The school graduate had a chance of securing a job as a messenger, clerk, gardener, housekeeper, teacher, or priest in the now emerging small modern sector of the economy, where the salary or income provided a "more comfortable" or

Table 2
Number of Primary Schools and Enrollments by Control of School: Selected Years 1881 - 1951

Year	Government	Assisted	Total	Enrollment
1881	3	136	139	5,000
1890-91	5	49	54	5,076
1901	7	128	135	12,018
1920	19	197	216	28,505
1930	28	312	340	41,917
1940	23	444	467	61,832
1949	36	584	620	100,888
1951	41	625	666	106,300

Source: George (1965), Education in Ghana. (See also Foster [1965]. Education and social change in Ghana.)

"affluent" lifestyle than the rewards offered by farming in the large, traditional agricultural sector. In addition, the educated person held a high position or status within the family and community in general, where such individuals acted as town secretary or adviser and interpreter at all government sponsored functions concerning local and national development projects. These, then, were the aspirations of both parents and students alike. They regarded the benefits that accrued from formal academic education as being highly desirable.

The School Curriculum

From 1882 there was a serious attempt to make the government assume greater responsibility for the provision of educational services. Most missions could no longer support their numerous schools and they solicited grants-in aid from the government (refer to Table 3). The education offered was an attempt to reproduce the structural characteristics of the British educational system which had emerged as a result of the Education Act of 1870. An important objective was to control the general nature of the curriculum offered by school in the Gold Coast so it would conform more closely to that offered by the British schools. By deriving financial support of the State, missionaries found themselves tied to minimal standards of education and to a curriculum developed by the State. The minimal curricula requirements, upon which grants were based, included the provision of instruction in reading, writing, English language and

Table 3
Government Expenditure on Education: Selected Years

Year	Grants to Missions	Total Expenditure
1880	£425	£1,325
1901	£3,706	£6,543
1919	£6,157	£54,442
1926	£30,887	£179,000

Source: McWilliam & Kwamena-Poh (1975), The development of education in Ghana: An outline.

arithmetic, as well as needlework for girls. Grants could be obtained for optional subjects such as English grammar, history and geography (Foster, 1965; Altbach & Kelly, 1978).

Instructional Methods

The method of instruction was rote memorization in a monitorial system, with English as the medium of instruction in the urban schools, while local languages were used in the rural schools (Foster, 1965; Graham, 1971; Carnoy, 1974). Schools were effectively streamed based on the medium of instruction used. There were the English medium schools and those in which instruction was offered in the local vernacular. These schools were, in part, "vocationally oriented" since they channelled students toward different occupations in life. English became the educational medium for those destined for urban life and/or leadership roles within either the indigenous society or the colonial order. The use of local languages in the rural schools was aimed at preparing these students for rural sector vocations (Altbach & Kelly, 1978).

Although the elementary curriculum was basically academic, both the colonial educators in the Gold Coast and those in Britain were interested in alternative educational forms--agricultural and industrial training--for the majority of the students, since they were destined to remain in the large rural sector. Introduction of such courses into the curriculum was intended to make them better farmers and craftsmen. Moreover, their knowledge and skills would diffuse into the community and help raise the general standard of living of the rural people. This vocational emphasis became part of colonial education policy in the Gold Coast (as well as in other colonies) beginning in the 1840s.

Even though there were individual schools that used indigenous languages, the educational system as a whole devalued these languages. Education provided in these languages was considered transitional to the learning of European languages (Altbach & Kelly, 1978). But it could also be argued that the existence of multi-ethnic languages, including Ga, Twi, Akwapim and Ewe, might have encouraged colonial educators to adopt English as a way of standardizing the medium of instruction. Several other reasons could also be provided to support this decision to later move to English as the medium of instruction in schools, including the fact that the colonizers perhaps seemed to have great difficulty learning and speaking the various local languages fluently and producing textbooks in all of them. Furthermore, there must have been a problem deciding which tribal or ethnic language was to be chosen as the dominant language in the schools. This would have given the particular tribe whose language was chosen as the official medium of instruction a type of dominance which could have resulted in serious ethnic conflict in the country.

According to Altbach and Kelly, (1978) the fact that instruction occurred in the colonizer's language was no indication that the colonized became exposed to the colonizer's culture. They argue that colonial schools taught a version of European language (English) and culture "adapted" to the education of the colonized (Altbach & Kelly, 1978). In other words, unlike the French Assimilation Policy which conferred the right of French citizenship on its colonized, the British did not intend for the Africans to become British. Rather they were to be "educated" to serve the interests of the colonizer through the performance of low-paying jobs.

The method of instruction in the Gold Coast schools, with its emphasis on rote memorization, therefore discouraged the development of rational, scientific and creative thinking. The system appeared to have been formulated on the belief that African students had acquired no previous knowledge from their own environment which was of use in their formal education. Further, it was assumed they were unable to think for themselves. Consequently, they were not made active participants in the teaching and learning process. The instructional strategy used instilled in them a fear of challenging or questioning the authority of their teachers and demanding justification for decisions taken by school authorities. Thus, students accepted without question what the school offered as the ultimate truth.

The curriculum, therefore, was not an out-growth of the society from which the child came. But neither was it an out-growth of the colonizer's society. It represented a basic denial of the colonized's past, and withheld from students the tools to build the future (Altbach & Kelly, 1978). The schools ignored the children's past (as in history instruction) and at the same time denied them skills for anything other than traditional labor--farming and local crafts. This resulted in a simultaneous obliteration of students' roots and denial of the means to effect change. On the other hand, it provided some skills including numeracy and literacy in English, which were of use to those who were to enter the modern sector of the economy. With this education one might become a secretary or interpreter; but, one could not become a doctor or a scientist or develop further his/her own indigenous culture (Altbach & Kelly, 1978). It also contributed a great deal to the low status accorded to agricultural work, and vocational training of any kind. This was the case in almost all the British colonies. The curriculum content reflected the interests of the various groups that formed the Ghanaian society, such as parents, educated minority and the colonizer. The perceptions of these groups helped to determine the goals of education in the Gold Coast as in other colonies. As Carnoy (1974), and Bacchus (1986) observed, to the elite groups and rich individuals, the provision of academic courses served the function of social reproduction. These groups accordingly considered vocational education in the middle schools to be the proper kind of training for the masses, particularly the rural people. It was an attitude calculated to ensure that the elite children continued on to the few secondary schools to receive the type of education required for securing high-level positions in the modern sector occupational structure.

To the parents, education was mainly an instrument of economic and social mobility through the introduction to a "better" life in the modern sector of the economy. It was expected to free their children from the unrewarding agricultural sector and the destitute character of rural life. Academic, as opposed to vocational education consequently served as "valid" knowledge to the masses. Thus, any attempt to change the focus of the curriculum from the academic orientation was often fiercely resisted by parents.

The colonizers, on the other hand, perceived colonial education as a means of furthering their economic and political interests. This kind of education taught the students some of the skills and attitudes required to become economically useful while maintaining their dependency on, and submissiveness to, the dominant group (Bacchus, 1986). The education provided was therefore geared toward preparation for life and work at the lowest levels of the social hierarchy. In addition, the colonizer aimed at developing a comprador elite class whose orientations, concerns and interests would remain compatible with those of the metropolitan power, even after the colonies had become self-governing and independent (Bacchus, 1986). This was reflected in the establishment of the elite Secondary Schools and, later, the

University College of Cape Coast which offered University of London degrees. In addition, some students were also awarded scholarships to study in Britain.

In review, it was obvious that the elementary school curriculum had a dual goal: (1) to improve students' productive capacity in the traditional sector; and (2) to produce lower-level manpower for such jobs as clerks and messengers, while allowing a few the preparation necessary for entry into the academic secondary schools and into teaching and the priesthood.

EDUCATIONAL EXPANSION AND UNEMPLOYMENT

Expansion of elementary education (primary and middle schools) from the 1830s, particularly after the First World War, not only increased the number of schools and enrollments at this level of the colonial education system. It also "overproduced" elementary school graduates, in the sense that the majority were unqualified for secondary education. Nor were they able to secure jobs in the modern sector economy as they had anticipated, due to the highly limited employment opportunities available in this sector.

In other words, no direct control was exerted by the colonial government to reduce the output of the primary and middle schools. However, it was clear that parents did not send their children to school so that they could return to subsistence agricultural work. Education meant one thing above all else: the opportunity to enter more highly paid posts within the modern sector economy. Foster

(1965) confirms this by writing that:

> African preference for clerical employment remained unchanged even where pupils were persuaded to undertake trade or industrial training. In this case, the vocational aspirations of Africans had little to do with the schools themselves but were a direct reflection of the actual vocational opportunities open to them--greatly due to the differential rewards accruing to different types of occupation (p. 132).

Thus, educational expansion at the elementary school level, despite the relatively inelastic job market of the small modern sector of the economy, coupled with both parents' and students' occupational aspirations, resulted in widespread unemployment among elementary school graduates. According to Foster, (1965) unemployment in the Gold Coast (as well as in the other African colonies) was evident even as early as the 1850s. This issue not only became a concern for the colonial government; it also paved the way for the birth of nationalism. Particularly among the educated, whose members included Casely-Hayford, Mensah Sarbah, J. B. Danquah, Kofi Busia and Kwame Nkrumah, unemployment among school graduates was viewed as the direct result of inferior colonial education and also the refusal by the government to create more jobs for the people.

VOCATIONAL EDUCATION

Introduction

During the 1840s, the slow socio-economic development and the growing problem of unemployment among educated in the Gold Coast, prompted the colonial government in Britain to design an education that would be more relevant to the needs of the local people. The government concluded that these problems had arisen because of the "bookish" (academic) nature of the school curriculum. In other words, concern increased for the development of a more "effective" or "relevant" curriculum. This concern was expressed by the Lt. Governor who, in a quotation taken from Foster (1965), observed that:

> at present there is no employment for educated boys...hence the results of education, pleasing as they may be, are not so healthy and permanent as they would be if they were associated with various branches of useful mechanical knowledge (p. 54).

In the British West Indies, similar calls were made by the local planters for the inclusion of practical courses in the curriculum. Bacchus (1986) for example, quotes an editorial included in the Kingston Chronicle of Jamaica, which argued that children on the Island began their education at the "wrong end" by being taught to read the Bible and to sing hymns. Rather, the article went on, they should start with an introduction to the "mechanical arts", the use of the "plough and harrow", the "plane" and the "adze", the "awl" or "needle".

Attempts therefore began to be made during the mid-nineteenth century to diversify the colonial education by including agricultural and industrial courses to offset the almost exclusively academic (the 3Rs plus religious education) nature of the existing curriculum. The remedy for Africa's socio-economic problems, it was believed, lay in her fertile soil, the productivity of which could be increased by improved agricultural skills and practices.

It was therefore the duty of the school to equip students with the necessary knowledge to utilize this natural resource more effectively. The relationship between the vocational curriculum and national development posited by the colonial government reflected its assumptions regarding the basis for success of the industrial revolution that occurred in England a century earlier. During that revolution children had been taught to "sing, knit, cobble shoes, and do gardening jobs" and the sale of the products of their labor helped to pay the expenses of the schools, as well as providing the children with meals (Graham, 1971). Accordingly it was felt that colonial education should also embody a range of activities broader than mere academic pursuits, if socio-economic development was to occur in these societies.

The Kay Shuttleworth Proposals

To achieve the socio-economic goals of education in the colonies, including the Gold coast, the Colonial Office asked the Committee on Education of the Privy Council to prepare a memoranda on this topic, with a view to spread in the British colonies such knowledge of industrial training for a "thriving peasantry among the colored races" (Foster, 1965; Bacchus, 1991).

The task of preparing the memoranda fell on James Kay-

Shuttleworth, the well known English educator. In January 1847, he presented his document entitled Brief Practical Suggestions on the Mode of Organizing Day-Schools of Industry, Model Farm School, and Normal School as Part of a System of Education for the Colored Races of the British Colonies. It became the first formal statement of British educational policy in colonial areas, including the Gold Coast.

In preparing his proposals, Kay-Shuttleworth knew that practical courses required additional financing. He therefore developed a program which would "combine intellectual and industrial education" in such a way that it would "render the labor of the children available towards meeting some part of the expense of their education" (Bacchus, 1991). In other words, he was intent on designing a financially self-supporting vocational education program in the colonies. This was calculated to reduce the government's educational grants.

In general, the new educational proposals stressed the following goals: personal development; improvement of the general standard of living and the development of social skills, and an appropriate level of political awareness among the "colored races of the colonies."

Specifically, the proposals intended to:

> 1. Inculcate the principles and promote the influences of Christianity by such instruction as can be given in elementary schools;

2. Accustom the children of these races to habits of self-control and moral discipline;

3. Diffuse a grammatical knowledge of the English language as the most important agent of civilization;

4. Make the school the means of improving the condition of the peasantry by teaching them how health may be preserved by proper diet, cleanliness, ventilation and clothing, and by the structure of their dwellings;

5. Communicate such a knowledge of writing and arithmetic and of their practical application as may enable a peasant to economize his means, and give the small farmer the power to enter into "calculations and agreements."

On the subject of industrial and agricultural training the proposals intended to:

6. Give practical training in household economy and in the cultivation of the cottage garden, as well as in those common handicrafts by which a laborer may improve his domestic comfort;

7. Improve agriculture to replace the system of exhausting the virgin soils, and then leaving the work of reparation to natural influences. The education of the colored races would, therefore, not be complete for the children of farmers, unless it included this object.

To this end, the textbooks of the schools should:

8. Teach the mutual interests of the mother country, and her dependencies, the natural basis of this connection and the domestic and social duties of the colored races;

9. Set forth simply the relation of wages, capital, and labor, and the influence of

> local and general government on personal security, independence, and order. (Privy Council Office, London, 1847, pp. 2-3).

Based on these proposals the Education committee of the Privy Council suggested that:

> 1. Special elementary schools be created where pupils would be taught basic skills;
> 2. Day schools for industry of (six-year program) be established to assist pupils in learning trades, gardening and agriculture with the girls studying housewifery;
> 3. Model farms to be set up to help pupils develop habits of industry leading to "a settled and thriving peasantry";
> 4. Teacher training schools to be established with an agricultural slant to the curriculum. Among the subjects to be taught were Chemistry and its application to agriculture, agricultural economy, surveying, practical mensuration, farm management, and treatment of diseases (Privy Council Office, London, 1984).

In addition to providing school graduates with worthwhile and broader occupational alternatives, these proposals were intended to bring "true" civilization to the colonies and also make education more relevant to national and local needs.

The Gold Coast Experience

In the Gold coast, the Privy Council's recommendations were adopted in an effort to restructure the education system. Although the demand for education was modest at this time, it had gained considerable recognition among the coastal peoples, particularly the Fantis. But the limited number of clerical jobs in the European-dominated sector of the economy meant that most of the school graduates could not find employment. Consequently, Dr. Madden, Governor Maclean, and Reverend Freeman suggested the establishment of model farms in each settlement in the Gold Coast (Graham, 1971). One model farm, which lasted about ten years, was thus set up at Dominasi by the Rev. Thackaray (Foster, 1965).

By 1850 the Wesleyans had set up model farms at Beulah and Napoleon (near Anomabu) where "work on the land was to be closely related to instruction in the classroom" (Foster, 1965). At these settlements the experimental crops included coffee, cinnamon, mangoes, ginger, olives and grapes. But they all failed perhaps due to the nature of the Gold Coast climate.

In the interior, the Basel missionaries in 1877 set up school-based industrial training programs which were supplemented by advanced work at a central industrial training institute in Accra staffed by both European and African teachers. This was later moved to Takoradi where it is now known as Government Technical Institute. This institute turned out skilled iron workers, joiners, and carpenters. It appears that the aim of the Basel industrial and agricultural training, combined with its boarding-house school system was, to isolate the African Christians from the traditional culture and its "heathen" practices, and to establish self-supporting Christian communities.

But by the end of the nineteenth century these early efforts to vocationalize the Gold Coast schools had failed, largely due to socio-economic, political and educational problems within the country. This will be discussed in detail later in this chapter.

SECOND ATTEMPT AT VOCATIONAL TRAINING

Introduction

Since the initial statement on colonial educational policy developed by the Education Committee of the Privy Council in 1847, there had been no additional British colonial educational policy until 1923, when the Colonial Office established an Advisory Committee on education in the colonies. In 1925 this Committee published what was to be the first general statement on British policies for colonial education in almost one hundred years. To a large degree the policy statements paralleled the conclusions of the Phelps-Stokes Report for the restructuring of colonial education.

The Phelps-Stokes Commissions

After World War I, both American and British missionaries working in Africa decided that a thorough enquiry must precede their post-war development plans. Thus, in 1919 the American Baptist Foreign Missionary Society channelled a request through the Committee of Reference and Counsel of Foreign Mission Conference of North America to conduct "a survey of educational conditions and opportunities among the Negroes of Africa with a special view of finding the type or types of education best adapted to meet the needs of the Native"(Foster, 1965).

In response to this request, in 1920 the Phelps-Stokes Fund of the USA, which was devoted to advancing the education of Negroes, set up two commissions to report on African education. The first commission studied education in West, South, and Equatorial Africa and in 1922 produced a report entitled Education in Africa. The second commission investigated East, Central, and South Africa. In 1924, it submitted its report entitled Education in East Africa.

The Phelps-Stokes Commissions' Report

Initially, the Commissions made clear the source of their approach by acknowledging the influence of principles developed in the United States by Samuel Chapman Armstrong at Hampton, and Booker T. Washington at Tuskegee. The Hampton-Tuskegee institutes offered American Negroes a combination of academic and technical training to prepare them to become model teachers, craftsmen and cultivators in their own communities. In other words, there was an attempt by the Phelps-Stokes Commissions to equate the position of the African with that of American Negroes. As the Phelps-Stokes Report stated:

> though village conditions in Africa differ in many respects from those in America where these activities have had great influence on the improvement of rural life, the resemblances are sufficiently numerous and real to warrant the belief that the plans above described may be adapted to colonial conditions in Africa (Foster, 1965, p. 157).

The educational plan devised for the African colonies, including Ghana, by the Phelps-Stokes Commissions thus gave primacy to concepts and practices that were originally targeted to Negro education in the Southern United States. As Foster (1965) notes:

> Western educational institutions had been transferred without reflection to the African scene and there was no attempt made to modify curricular content in the light of African experience. This created some major dysfunctionalities such as overproduction of school graduates, unemployment of the educated and a general dislike for agricultural training. It was therefore necessary for the colonizers to undertake a careful sociological investigation of African conditions, and upon the basis of this, develop a sense of specific recommendations on the desired shape of future African education (pp. 157-158).

The Commissions were able to make a series of very specific recommendations, as quoted by Foster (1965):

> 1. The development of an educational system should be substantially based upon an agricultural curriculum. Since:
>
>   the overwhelming majority of the Africans must live on and by the soil, but the schools make very little provision for training in this important element for life.
>
> 2. An agricultural curriculum was to be supplemented by a system of elementary trade schools to teach the simpler

> elements of trades required in Native villages and to prepare for the less skilled occupations.

Here, Foster observes that although the Commissions were primarily concerned with the provision of agricultural and simple technical instruction for the masses, they were conscious of the tiny proportion of students from small number of more academic institutions who would proceed to further studies and later enter professional or semi-professional occupations (Foster, 1965).

> 3. Tribal languages should be used in the lower elementary stages. The language of the European nation should be introduced in the upper standards only.
>
> 4. Other subjects such as history and geography were to be more closely related to the local milieu (p. 159).

In general, therefore, the recommendations of the Phelps-Stokes Commissions were to develop a more "practical" and "functional" or "relevant" education within the African setting in order to provide more useful instruction for the vast majority of African pupils. Again, to a great extent, these recommendations appear in many ways to be in the same spirit of the James Kay-Shuttleworth proposals of 1847.

The Advisory Committee Memoranda

Based upon the recommendations of the Phelps-Stokes Report, the Advisory Committee on Education for the colonies produced two subsequent reports in 1925 and 1935 respectively. The views of this Advisory Committee, as embodied in its two major reports can be summarized as follows:

1. The provision of education in African societies was to be based on the continued activities of voluntary agencies, but the general direction of policy was to remain in the hands of the colonial government.

In other words, the decentralization policy of educational development was to be maintained, but more central government supervision or control was called for.

2. The schools were to be adapted to native life.
3. Grants-in-aid were to be made on the basis of school efficiency.
4. The use of local vernaculars in education, particularly in the lower forms, was to be stressed.
5. There was a growing need for more active supervision of schools by the colonial governments.
6. Great stress was placed on the need for technical, vocational and agricultural training at the expense of more 'traditional' (academic) subjects within the curriculum.
7. There was an increasing awareness of the need to expand educational facilities for women and girls (Foster, 1965, pp. 159-160).

The memoranda of the Advisory Committee paralleled the conclusions of the Phelps-Stokes Commissions, though amplifications were made concerning the precise application of its principles within British colonial areas.

Concerning the adaptation of schools to native life, in its 1925 report the Advisory Committee asserted that:

> Education should be adapted to the mentality, aptitudes, occupations and the traditions of the various peoples, conserving as far as possible, all sound and healthy elements in the fabric of their social life; adapting them where necessary to changed circumstances and progressive ideas, as an agent of natural growth and evolution (Foster, 1965, p. 160).

In its attempts to adapt colonial education to local lifestyles and practices, the Committee formulated the following major aims:

> 1. To render the individual more efficient in his or her condition of life.
>
> 2. To promote the advancement of the community as a whole through the improvement of agriculture.
>
> 3. To develop native industries and improve the health of the people.
>
> 4. To train the people in the management of their own affairs through inculcation of true ideals of citizenship and service (Foster, 1965).

With respect to the provision of agricultural education and the development of rural communities, the 1935 Memorandum on the Education of African Communities stated:

> The basis of African life is, and is likely to

> remain agricultural. If this is so, one of the primary tasks of African education must be to assist in the growth of rural communities securely established on the land (Colonial Office No. 103, pp. 6-8).

Thus, like the 1847 recommendations of the Privy Council once again a strong emphasis was placed on the need to adjust the content of African education, to align it more directly with the needs of the society. Since this meant the preparation of citizens for life and work in their own communities it implied the vocationalization of education. The effect was then another attempt to de-emphasize the study of academic courses in favor of the development of basic skills in agriculture and industrial training so that the many students who remain in the rural areas would become more useful and productive to themselves and to their communities.

The 1935 report also gave importance to the development of mass education, adult literacy programs, and environmental studies. In this respect, the Report stated that:

> The progress of a backward community will be greater and more rapid if the education of the adults is taken in hand simultaneously with that of the young...efforts to educate the young are often largely wasted unless a simultaneous effort is made to improve the life of the community as a whole (Thompson, 1981, p. 32).

The basic thrust of the 1935 report was the preparation of all members of the community, irrespective of their age and social status, in terms of improved methods of conducting their traditional occupations (Cowan et al., 1966). The importance of relating colonial education to local occupations compelled the Advisory Committee to issue a third memorandum in 1944. Entitled Mass Education in African Society (Hilliard, 1957). This document stressed the need to educate all members of these societies. Accordingly, the various reports and recommendations produced by the Advisory Committee that followed the Phelps-Stokes study led to the establishment of colleges in East and Central Africa patterned on the Jeanes Schools that were devised in the United States.

The Jeanes Teachers

In 1907, Miss Anna T. Jeanes, a humanitarian and philanthropist, donated a substantial amount of money to improve the educational needs of the rural communities in the southern part of the United States. Jeanes teachers were mostly women graduates from Hampton and Tuskegee institutes, which were already active in providing practical education for the Negroes.

These teachers emphasized the use of readily available local materials to prepare students with an "education for life" rather than mere certification (Bray et al., 1986). Staff members, once trained, were assigned responsibility for clusters of rural schools. They travelled around the rural areas to provide support and advice and promoted among large rural black communities the Hampton-Tuskegee educational doctrines of self-help and the dignity of manual labor. They were thus involved in introduction of simple forms of industrial and agricultural work into the school. They also visited and taught in people's homes, and promoted gardening and health services.

In 1925 the first Jeanes school was opened in Kenya. Shortly after, two more were opened in what was then Southern Rhodesia, one in Northern Rhodesia, and a fifth in Nyasaland. In 1927, Achimota College was founded in the Gold Coast. It also was to operate along the lines of the Jeanes schools. The fate of the Jeanes Schools is discussed later in this chapter.

Impact of the Colonial Educational Policy Recommendation in Ghana

Following the publication of both the Phelps-Stokes Report and the Advisory Committee's recommendations, the period of the 1920s was marked by a systematic attempt to introduce reforms into the primary and secondary education in the Cold Coast. Since the Gold Coast Governor, Sir Gordon Guggisberg, hailed the Phelps-Stokes Report as "the book of the century, a combination of sound idealism and practical commonsense," more than any other colonial governor, he attempted to model Gold Coast education on the lines suggested by the Commission (Foster, 1965; Hilliard, 1957; Graham, 1971). Thus, in his annual address to the Legislative Council on March 6, 1924, Guggisberg declared that "education of the mind as well as of the hand and of the brain, is the keystone of the edifice forming government's main policy" (Hilliard, 1957). His address, referred to as The Keystone (H.M.S.O., 1924) stated that:

> 1. Literacy was not the be-all and end-all of education; character training and good trades and professional training were important.
> 2. The existing system tended to produce a semi-educated class which despised manual labor; its standards were poor and it did not provide real character training.
> 3. The chief cause of these defects was that those who taught had themselves received an inferior kind of education.
> 4. The main task of educational reform must therefore, be to provide a good all-round secondary education, upon the basis of which a better-educated class of teachers could be trained, and thus, in time raise the level of education generally (pp. 7-9).

Achimota College was the first and perhaps the most significant of the developments which resulted from the new impetus and direction which Guggisberg gave to education in the colony. From 1930, the college consisted of a complete educational ladder from kindergarten to university classes, with teacher training for both boys and girls (Hilliard, 1957). University classes went up to London Intermediate Standard in Arts, Science and Agriculture, to the first examination for Medical Degrees, and to final degree standard in Engineering (Hilliard, 1957). Despite the fact that it was an elite school, Achimota made an attempt to devise a curriculum adapted to the African milieu and needs. But this idea met strong opposition from the elite minority who were far less interested in the native content of *African education.* Achimota has therefore remained an elite academic college to this day.

In 1922, four junior trade-schools were opened by government, two in the coastal area, one in Ashanti, and one at Yendi (this was transferred to Tamale in 1932). These schools were designed to meet the growing need for artisans who had attained a reasonable general educational standard. Provision was therefore made for the teaching of literacy as well as technical subjects in these schools (Hilliard, 1957). It must be noted here that the types of technical graduates produced by these schools were mainly personnel required by government in the fields of architecture, town planning, factory machine operation and repairs, road and railway engineering and land surveying. Hence, they were more prepared for modern sector employment than for rural jobs.

To assist in the teaching of agriculture, a number of courses for teachers and students were offered at the newly established agricultural schools at Aburi, Asuansi, Kumasi and Tarkwa (Hilliard, 1957). It was considered necessary to diversify the teacher college curriculum to include agricultural courses, the teachers were expected to teach the subject to both pupils in schools and to the community members involved in the mass education programs. Every effort was made therefore to assist in relating Gold Coast education to the "practical" needs of the community and the individuals within them.

With regard to financing the various programs, the new reforms coincided with a considerable rise in the general revenue of the country. Hence, total expenditure on education rose from £114,000 in 1926 to £291,000 by 1931 (Hilliard, 1957). But due to the depression of the 1930s, this increase was short-lived.

Like the Gold Coast, similar endeavors were made to diversify education in Tanganyika (now Tanzania), Kenya, Nyasaland, Northern and Southern Rhodesia. The Jeanes schools that operated in these areas also attempted to relate curriculum content to the local community, and in particular to rural occupations. The focus also was the development of agriculture, local industries (crafts etc.) and health care (Thompson, 1981).

Evaluation of the Implementation of the 1925 Education Proposals: The Nuffield Commission's Report of 1953

In 1951, the Secretary of State for the colonies and the Nuffield Foundation jointly sponsored a project to evaluate the 1925 and 1935 educational policy and practice in the British Tropical African territories, including the Gold Coast. During the second half of 1951 two small groups of experts were formed to visit West, East and Central Africa respectively. Their task was to review education up to and including the secondary level.

After visiting the specified territories in Africa the study groups criticized educators in Africa for:

> Providing too superficial an education and for providing it to too few children; for being too much bound by external examinations; for being too bookish and unpractical; for

> producing too many clerks and too few farmers, artisans, technical, and reliable administrators; and for utterly failing to stop the drift to towns, the decay of agriculture, the break-up of tribal society, and the loosening of moral standards (Colonial Office, London, 1953; Thompson, 1981, p. 64).

The report submitted by these two groups contained a testament of several ideas already present in the 1925 and 1935 memoranda on education in Africa. It laid a strong emphasis on vocational education in the schools to bring about change of attitude among students and parents. However, its recommendations did not receive the expected attention in the colonies because most of the African states, particularly the Gold Coast, were moving towards independence from colonial rule. Hence, the British were more concerned with training Africans to replace expatriates in the modern sector economy than with implementing the vocational education recommendations of the Advisory Committee. This new concern thus called for an expansion of the traditional "academic" education program.

At this point, it is necessary to identify the factors which, for the second time in one hundred years, contributed to the failure of colonial educators to introduce vocational education into the Gold Coast as well as into the other colonial African education systems.

WHY VOCATIONAL EDUCATION FAILED IN COLONIAL GHANA

Several reasons underlie the failure of the colonial government to vocationalize education in both the Gold Coast as well as in the other African colonies. First, colonial educators had assumed that the creation of vocational schools would generate a demand for such an education among students. However, they neglected to find out which groups were using the schools and for what purposes. To the Africans, European education (academic) meant one thing: escape from rural servitude, destitution and hard work to a high-paying job in the small modern or European-dominated sector of the economy. They strongly resisted any curricula change which tended to deny them such an education. In their view, vocational education was fit only for slaves and the illiterate or unskilled rural masses. As Scott (1938) observed:

> the African declined to accept the indigenous system of training as a foundation for his future education...he would regard any suggestion in the educational sphere to build upon the old as tantamount to a refusal to grant him the benefits and opportunities of the purely western forms of training, to which he not unnaturally attributed the domination of the white (Yearbook of Education, p. 716).

Bacchus (1991) reports resistance to similar proposals in the West Indies. He points out that local West Indian planters perceived the Kay Shuttleworth proposals as "far too sophisticated and too expensive" and "more likely to produce independent small farmers" than the cheap laborers they needed to work the sugar estates. Consequently, religious groups, including the Baptists, who were engaged in the education of the black masses, saw it as "an attempt to keep the black population perpetually in the role of laborers on the sugar estates".

Parental objection to vocational education also became a formidable hindrance to its implementation in African schools. This was largely due to the fact that, since education was not compulsory and since parents had to pay fees, they continued to register their support for, or objection to, the content of the curriculum by refusing to send their children to school if they did not approve of what was being taught. And since the survival of schools and the level of the teacher's income depended very much on the number of children in attendance, through this means, parents were able to influence what teachers actually taught in the schools. In the Gold Coast, Kenya and Uganda, the missionaries had to acquiesce to the educational demands of parents in order to win "souls" for their respective denominations. According to Foster (1965) had the proponents of such schemes of educational reforms been prepared to examine colonial attitudes and expectations regarding the "work and function" of schools, the failure of vocationalizing attempts might have been predicted.

Failure to investigate African attitudes toward formal education implied that there was little or no recognition of the educational aspirations of Africans. Nor was the critical role of schooling as an instrument of social mobility discussed sympathetically or dispassionately. That is, not only did the proposals of the various reports fail to recognize the economic and social aspirations of the individual Africans, but also the latter were not consulted as to what type of education best fulfilled their needs. In other words, vocationalization was a "top-down" decision which ignored the importance of the African with respect to the attainment of the goals of the new educational proposals. The success of this reform was therefore very much in doubt from the beginning.

Second, it was also assumed that the agrarian nature of the colonial economies would support the introduction of vocational training. While this assumption appeared true, the authorities also failed to consider the income differentials which existed between clerical jobs in the modern sector and agricultural jobs in the rural sector. Although the colonial economies, including that of the Gold Coast, were basically export-oriented, geared toward the production of cash-crops such as cocoa, coffee and sisal, the low prices offered the producers had not improved the farmer's income. Furthermore, the colonizers neglected the development of the vast rural economy. This made the urban areas more attractive and they continued to lure graduates away from agricultural jobs in the rural sector.

Additionally, since agriculture appeared to be an economic enterprise with uncertain financial outcomes due to price fluctuations in the world market, this industry was less attractive, particularly to the educated African. For example, during the period 1908 - 1914 cocoa prices fluctuated between £38 and £49 per ton on the world market. By 1920 the price had risen to £129 per ton, only to drop to £19 per ton in 1933 (Foster, 1965). The fluctuating cocoa price has persisted to the present-day. In a nationwide radio and television broadcast, the current Head of State of Ghana, Chairman Rawlings recently noted that:

> The world market price of cocoa went down from an average price of almost £3,500 sterling per ton in 1977 to less than £1,500 sterling per ton in 1987. Since 1987 the price has continued to fall to the point where this year (1990) it reached a low level of about £600 sterling per ton (Home Front Magazine, March, 1990, p. 7).

Price fluctuations, compounded by swollen shoot disease which wiped out entire cocoa farms, made the industry unattractive to both parents and school graduates in the Gold Coast. Above all, the few educated individuals (and even the masses in general) preferred imported to locally produced goods. Therefore, demand for the latter remained low and this situation made it impossible to engage in farming or the crafts as economic ventures.

The demand in Africa for technical education in the traditional skills was also very low. For example, by 1948 the category of skilled workers and artisans accounted for less than 10% of the male labor force in the Gold Coast. This not only made technical education unpopular, but also forced a larger majority of technical educated personnel to seek employment outside the country, a trend which continues in most of these countries even today. It also indicated a discrepancy between policy and practice in relation to the colonial government. While the Government verbally supported vocational education in schools, in practice it made little or no use of such skills in the economy by neglecting the development of activities that would result in the productive employment of vocational graduates.

To the Africans, therefore, 'valid' knowledge and 'valid' education meant academic education since it alone led to the acquisition of wage employment. Introduction of any other type of education was therefore considered a deliberate attempt to deny the people the opportunity of gaining access to modern sector jobs, income and the accompanying social status. Parents therefore demanded academic rather than vocational education for their children. It was their hope that, upon securing clerical employment in the modern sector, children would use their "high" incomes to transform the family's general standard of living. Therefore, it is not surprising that Africans resisted colonial attempts to vocationalize the school curriculum. The colonial authorities had failed to take into consideration the reward structure associated with occupations in the society and the attitudes of the Africans towards education that reflected their recognition of this system of rewards.

Third, there was the assumption that the agricultural program offered by the schools would develop better farmers among the majority of the students who would end up in the rural sector. But since opportunities for achieving social status and economic mobility existed only in the modern sector, and since this required academic qualifications, it was erroneous to assume that so-called "better farmers" would be satisfied with the low income offered by the deprived rural economy. Even if students were willing to practice their "better" farming methods in the rural areas, the parents were unwilling to share or give up fertile lands. The latter also refused to go along with the "new methods" of farming since they undermined the long-cherished traditional ways of cultivating crops.

Fourth, it was conjectured that vocational education would develop relevant attitudes, skills and knowledge among students to aid in national as well as community development. Again, some pertinent questions remained: What were the "relevant" community and national needs? What basic vocational skills and knowledge were to be taught in the schools to achieve these "needs"? The proposals failed to recognize that a wide variety of local needs existed--the need for better staffed schools, good roads and hospitals, for example--which the school curriculum could in no way provide. It also appeared to most Africans that academic education had greatly contributed to the development of the metropole. Understandably, then, they held the view that national development was heavily dependent upon this type of education. And the rural/urban income differential did not encourage support for the study of vocational courses in the schools.

Fifth, the policy of adapting education to rural needs in Africa was derived from an American approach to the Negro problem in America. It was a wholesale transfer of concepts and practices developed within the American content (Foster, 1965; Berman, 1971). In other words, it equated the needs of the African with those of the American Negroes. This was clearly reflected in the adoption of the Jeanes philosophy of education which was a direct transplant from Hampton and Tuskegee Colleges. Thus the colonial educators ignored the fact that the needs of the colonized Africans were quite different from the needs of newly-emancipated American Negroes. This transplant was therefore bound to fail.

According to King (1976), the impact of the Jeanes teachers was quite limited in Africa. In Kenya, the Jeanes teacher training schools had difficulty offering an agricultural curriculum as well as recruiting students. Africans of ability wanted to advance their own school achievements, especially in English, and were not attracted to a program which was aimed at the training of teachers and the broadening of the village school curriculum. Again, Jeanes teachers were not sufficiently confident or adequately prepared in the academic subjects to give the intended boost to standards and relevance of work in primary schools. Rather they concentrated mainly on community development work. Furthermore, the missions were reluctant to let their best teachers go for two years training. This meant those trained in the Jeanes doctrines were of mediocre caliber in terms of their academic background. Also, since the best teachers were primarily interested in advancing their professional and socio-economic status, they were not attracted to a training course which prepared them to remain in the villages (Heyneman, 1970). Thus, the Jeanes teachers, after receiving their training, came to realize that the occupational skills which they wanted to develop were not those to which pupils and villagers aspired.

It was equally clear that even the American Negroes themselves resented this type of education, despite its apparent "success" in the United States. W. E. B. DuBois foresaw that the development of specific types of institutions appropriate to rural Negro populations could only exacerbate the rigidity of the negro-white caste structure. For him the question of "educational parity" was sociologically more significant than the question of educational content (Foster, 1965). Similarly, in Africa, particularly the Gold Coast and Nigeria, efforts to provide so-called "useful" education for the peoples were interpreted as attempts to keep them in permanent subservience to the European economic and political life. In this light Bude (1983) quotes Azikiwe of Nigeria:

> The theoretical basis favoring an education in the crafts and in agriculture for the African is wrong. It assumes that the African is better suited to craft and agriculture work, an assumption which can hardly be correct (p. 125).

In the Gold coast, attempts to vocationalize education were also vigorously resisted by the emerging elites who argued that such an education eroded the quality of education in general.

Commenting on the provision of vocational education in the elite Alliance High School in Kenya during the colonial period Anderson (1970) noted that:

> vocational subjects were held by the pupils in less esteem and were gradually dropped from the curriculum. Agriculture, despite determined efforts by the staff, was an early victim (p. 23).

Thus, the attempt to implement an approach to education that was imported from America foundered in the African context. The colonial authorities had failed to realize that different environments required specific and separate studies in order to design appropriate educational programs. It was also a warning to both the colonial educators and the African elites that imported education models, no matter how effective they appeared to be, were not necessarily relevant in other contexts.

Finally, the implementation of vocational education faced several problems at the school level. First, the proposals failed to provide an explicit definition of the nature of the new curriculum. It was not clear whether the proposals suggested pre-vocational or vocational studies. Nor was it clear whether the practical courses constituted an integral part of the general education program or were to be considered as separate courses. Additionally, the issues of how to integrate the two curricula and where to provide the practical training were not clarified. Consequently, school administrators and teachers did not know whether to provide such courses on or off school premises. This was further exacerbated by a lack of content definition. That is, the proposals failed to define specific vocational courses of study or the scope and content of such courses for schools.

The lack of a clear definition thus relegated the practical courses to the fringes of the school curriculum. These courses were perceived as extra-curricula activities, while academic courses dominated the study programs. Not surprisingly, both teachers and students eventually came to regard the vocational courses as less important to the future life of the pupils. This attitude became an obstacle to the general implementation to vocational education in the schools.

Second, it appeared that no attempts were made to include vocational courses as part of the school examination program. Since an examination report or certificate was required of graduates seeking employment, both teachers and students understandably spent more time on examination subjects than on non-examination courses. This helped to diminish the importance of "skills education" in the schools.

Third, implementation of the new curriculum at the school level was undermined by the lack of qualified vocational teachers. This was further worsened by problems posed by inadequate materials, equipment and supplies, ineffective administrative and evaluation strategies, and a lack of financing (Graham, 1971; McWilliam & Kwamena-Poh, 1975).

Conclusion

Although colonial attempts to vocationalize education in the Gold Coast (and the other colonies) appeared sensible, the realities of the situation were not given full consideration. Perhaps the basic or fundamental error committed by the colonial educators was to presuppose that the source of the socio-economic problems of the colonies lay in the external inefficiencies (irrelevance) of the school curriculum (Foster, 1965). But the socio-economic problems, including unemployment among the educated, were not related, to the character of the school *per se*; rather they were the result of a dysfunctional consequence of the relationship between a rapidly expanding school output and a virtually stagnant economy.

The next chapter examines vocationalization of education as a socio-economic change-agent in post-colonial Ghana.

CHAPTER III

VOCATIONALIZATION IN POST-COLONIAL GHANA

Introduction

Despite unsuccessful efforts during the colonial period at broadening the curriculum to include vocational or practical subjects, the Government of Ghana continued its efforts in this direction, and introduced a number of new projects aimed at achieving similar goals. These were the Continuation School Project (1969-76) and the Experimental Junior Secondary School Project (1974-86). This chapter will briefly examine these projects, focusing on their rationales, goals, implementation strategies and the reasons for their failure.

Educational Expansion and the Revival of Vocational Education in Post-Colonial Ghana

Educational Expansion

The election of a new Legislative Assembly in February, 1951 symbolized the passing of the colonial era in the Gold Coast. From that date, the effective control of internal policy in the country lay in African hands, becoming more permanent in March 1957 when full independence was granted by the British. The priority which the new government--the Convention Peoples Party (CPP), led by Dr. Nkrumah--attached to education and national development was reiterated in the words of Governor Guggisberg: "Education is the keystone of a people's life and happiness" (Foster, 1965; Hilliard, 1957; Graham, 1971; McWilliam & Kwamena-Poh, 1975).

By 1951, the school system comprised a relatively small group of highly selective secondary schools superimposed upon an expanding but still very limited primary school sector. This was further marked by urban/rural inequalities which existed within the system in terms of the distribution of schools. Among the new government's first aims, therefore, was to meet as soon as possible the most urgent popular demand which was for "a measure of education for every child of school-going age" (McWilliam & Kwamena-Poh, 1975). Thus, the government decided to emphasize the development of the primary and middle school (elementary education) system and to increase the enrollment of children at that level. To achieve this objective, it launched the Accelerated Development Plan in 1951.

The Accelerated Development Plan: 1951-1960

The main objective of the Accelerated Development Plan was "to help develop a balanced system working toward universal primary education as rapidly as consideration of finances and teacher training allowed, but maintaining at the same time proportionate facilities for further education for those most fitted to receive it" (McWilliam & Kwamena-Poh, 1975). In view of this, the government abolished fees at the primary level (to encourage all parents to send their children to school), and also transferred educational control from the missions to the State (McWilliam & Kwamena-Poh, 1975).

In broader terms, the plan had three main objectives:

1. To increase literacy and numeracy among the citizens of

Ghana.

Like the rest of the new emerging nations (ex-colonies) of Africa and elsewhere, achievement of high levels of literacy and numeracy rates was interpreted as being one of the primary indices of a "modern" or "developed" nation. It also conferred "power" and "recognition" at the international level. The new government was therefore eager for Ghana to be perceived as a "developed" and no longer "backward" or "undeveloped" country by increasing literacy and numeracy rates among the people.

2. To create equal access to education for all primary school-age children of the country, regardless of their ethnic, regional, socio-economic background or sex.

Under this objective educational expansion was effected to fulfill the promise made by the CPP government to the people during its election campaign. The objective was to extend education to as wide a group of people as possible. This was to counter the policy of the colonial government which educated only about 5% of the entire population. Second, there was the strong belief that education could effect radical transformations in the well-being of the people by developing in them favorable attitudes to change, increase the level of their political participation and ensure greater equality in the distribution of wealth.

3. To produce the educated manpower needed for the few existing industries, and particularly to fill the vacant posts in the civil service left by colonial expatriates.

During this period (1950s and 1960s) industrialization was one of the goals of the nation's development strategy. Since formal education produced the required knowledge and skills for this purpose, the new nation invested heavily in expanding its educational services. The CPP government, therefore, placed an overwhelming emphasis upon the provision of education at the expense of other alternative programs such as infrastructure and rural development. It was believed that the development of qualified manpower for both the civil service and industrial concerns would "speed up" Ghana's efforts to "catch up" with the developed nations. The annual budget for education, therefore, rose by about 15% from 1950 to 1951 i.e. from £902,00 to £1,065,000.

By 1960 the Accelerated Development Plan had increased both the number of schools and enrollments at the pre-university level, particulary at the primary and middle school levels (see Table 4).

More important, enrollments in vocational/technical institutions (these were post-primary vocational institutions) rose from 296 in 1950 to 2373 by 1960. However, compared to the increases at both the elementary and secondary levels, it appeared that more emphasis was placed on expanding academic rather than vocational education at this time. This was due to the resistance to this type of education which the colonial authorities had earlier tried to impose upon the Africans, and to the desire by the Government to promote higher education for its citizens in order to prepare them to fill top level jobs in the public sector and in the developing industries.

The curriculum of the elementary school corresponded broadly to that of Britain, since any attempts to deviate from the colonial academic curriculum was interpreted as a deliberate measure to continue an inferior system of education abandoned by the metropole (Foster, 1965). In other words, "Africanization" of education was fiercely resisted. The massive expansion effected by the Accelerated Development Plan, therefore, was not accompanied by any immediate proposals to radically restructure the curriculum to include vocational subjects. However, the achievements of the Plan indicated that all the developments in education over the century of colonial rule were minuscule as compared with the achievements in education in only a decade of self-rule in Ghana.

The Second Development Plan: 1959-1964

The increases at both the primary and middle school levels resulted also in an increasing demand for expansion of the secondary sector also, since large numbers of middle school graduates were qualified for secondary level education. This issue received government's attention in the *Second Development Plan* for

1959-1964 which aimed at expanding secondary education. The Ghana Educational Trust, with a capital of £2.5 million from the Cocoa Marketing Board funds, was set up to accomplish this task (Foster, 1965).

By 1966 the number of secondary schools had doubled, with a total enrollment of 93,526 students (refer to Table 4). During this period only two vocational/technical institutions had been established making a total of eleven such schools enrolling about 4,000 students. This slow development of vocational education, as opposed to the rapid expansion of academic education, appeared to encourage the population to believe more in the "superiority" of the latter over the former in terms of its importance to national and individual socio-economic development. Furthermore, it also showed that the government itself did not fully believe in the contribution of vocational education to national development. The national economy was absorbing academic rather than vocational graduates resulting, in a low demand for vocational education by the students attending school. However, because of the limited number of jobs in the modern sector in relation to the increased output of academically qualified students, the problem of unemployment among the educated, particularly the middle school graduates, escalated to become a concern of the CPP Government.

Vocationalization in the Post-Colonial Era

As in the colonial period, efforts to vocationalize education continued to characterize the education policy of many other LDCs

Table 4
Number of Institutions and Enrollments in Ghanaian Pre-University Education System for Selected Years

Year	Primary	Middle	Secondary	Teacher Training	Vocational Technical
1950	(1,081) 144,300	(511) 59,961	(12) 2,800	(16) 1,600	(5) 296
1956	(3,312) 436,900	(862) 108,500	(35) 8,900	(28) 3,800	(9) 1,540
1960	(3,425) 478,100	(1,177) 147,500	(59) 16,577	(31) 4,500	(9) 2,373
1966	(7,913) 1,116,449	(2,346) 286,566	(103) 93,526	(83) 15,768	(11) 4,010
1970	(7,293) 1,015,457	(3,201) 424,430	(108) 46,512	(73) 18,368	(15) 7,577
1973	(6,734) 1,000,510	(3,656) 446,695	(149) 62,479	(59) 13,600	(15) 8,632
1974	(6,843) 1,014,964	(3,711) 440,065	(162) 68,489	(56) 10,621	(17) 10,348
1986	(9,742) 1,565,236	(5,589) 718,444	(229) 797,528	(39) 16,522	(28) 35,289

* The number of institutions are in the brackets.

Source: Taylor, E. (1974); see also UNESCO Statistical Yearbook (1990).

during their post-independence, because governments and educators continued to regard academic education as unsuitable for all students--especially those receiving post-primary education. This was because rapid expansion of more academic educational programs in the years immediately following independence produced an oversupply of school graduates who could neither pursue higher education (due to limited places or inability to qualify) nor secure jobs, due to their lack of vocational skills. For example, in Ghana those elementary school graduates who did not get to secondary schools had to join the labor force and, of the limited number selected for secondary education, only a third proceeded to higher education. The rest of these graduates had to join the labor force to compete for the limited number of available jobs in the public sector.

The inevitable result was that the problem of unemployment among those who had received an education was increasing. Vocationalization of education was therefore considered necessary since it would provide a more relevant, useful and productive education system, which would not only benefit students after graduation--but would also make investments in education more economically profitable for the LDCs'. The commonly held-expectation was that the returns from educational investment (in the form of graduate employment and diverse services) would increase productivity, thus fostering socio-economic growth in these societies.

VOCATIONAL EDUCATION IN GHANA

The Seven-Year Development Plan (1963/64-1969/70)

To address the dilemma of the educated unemployed, the Nkrumah Government came up with a 7-year Development Plan which categorized education as an activity under its "economic development" strategy based on the claims of the human capital theory. The Seven-Year Development Plan recognized education as the "foundation on which industry and agriculture must be built." (Ghana Government, 1963). In this respect, the government viewed education from two perspectives. First, as a means of increasing productivity the people ought to be made receptive to new ideas, a task for which education could prepare them. Second, education should teach the population the specific skills needed to produce the goods and services required by the economy. This was an attempt to develop a modern labor force for the "rapid expansion in agriculture, industry and other sectors of the economy" in which revolutionary developments were envisaged (Anim, 1966). It was hoped that the new proposals would make education "more relevant" to both the individual and the nation as a whole and a more effective instrument in helping to solve the problem of unemployment among the educated.

The government recognized that:

1. There was a need to develop a plan which would eventually contribute to the solution of the unemployment problem.
2. There was a need to plan towards

effecting change in the attitudes of school leavers, turning their attention away from white collar jobs to more profitable practical vocational occupations.

3. There was a need to train children to acquire the necessary skills that would aid development in rural areas (Adams & Chen, 1981, p. 166).

To this end, the 7-year Plan proposed to:

1. Select pupils for secondary schools after six years of primary education.
2. Eliminate the middle schools and replace them with continuation schools in which courses offered would be vocational in nature--such courses as agriculture, shorthand, typing and office practice, simple bookkeeping, elementary accounting, housecraft and handicrafts (Report of the Ministry of Education, 1962).

It should be noted that, for the first time since the end of colonial rule, vocational education in schools had been defined to include business courses.

The Continuation School proposal was, therefore, a response to the need for economic expansion, as well as an attempt to help cope with the unemployment problem. In this respect it appeared the government associated the growth of unemployment among the educated with the "irrelevance" of the school curriculum. Furthermore, the country embarked upon an economic development program of import-substitution industrialization. This development strategy required skilled manpower--a need that could not be met by what was basically a traditional, examination-oriented, academic curriculum.

However, the implementation of the 7-year development proposals was temporarily suspended by the government, mainly due to growing political discontent with the CPP among the general population. The unemployment problem, in addition to the low price of cocoa, generated anger, particularly among the farmers. The government therefore considered it "unwise" to proceed further with its plans to vocationalize education at this time.

THE NATIONAL LIBERATION COUNCIL (1966-1969) AND THE INTRODUCTION OF THE CONTINUATION SCHOOL PROGRAM

In February 1966 the Nkrumah government was overthrown by a military regime which referred to itself as the National Liberation Council (NLC). In June of that year, the new administration set up an Educational Committee headed by Professor Kwapong of the University of Ghana (Legon). Its task was to conduct a comprehensive review of Ghana's educational system at all levels. The committee's major purpose was to examine the prevailing problems in the system and make recommendations for its improvement.

The Kwapong Committee (1966)

A major task of the committee was to put forward a philosophy of education which was acceptable to the nation and to the NLC. It was also to indicate the type of education that would be the embodiment of such a philosophy. The Kwapong Committee was also charged with determining how to make the best use of available resources in the service of education. Finally, following this, it was to recommend national priorities for educational development on the basis of present and future needs (Taylor, 1974).

Even though the committee toured the country and held numerous public hearings in which individuals and representatives of groups presented their views on the kinds of changes in education that they felt the country should have, the policy options that emerged from the committee's report could not be said to be the product of national debate or local research, or of experimentation and comparative analysis. Rather, the committee adopted Nkrumah's 1962 education proposal--which had been rejected and used as one of the reasons for his overthrow by the military--to replace the existing middle schools (Forms 1-4) with programs that would provide a "more appropriate terminal education for elementary school-leavers" (MOE, 1968). The Kwapong committee's recommendation, therefore, was to leave the academic-oriented curriculum of the first eight years of elementary education intact. This decision, it would appear, was intended to allow the children of the elite to enter the secondary schools at the grade 8 level through a selection process based on the results of the Common Entrance Examinations. This group would avoid the study of vocational subjects which were part of the program offered during the last two years of elementary education. Those who failed the selection examination for the secondary schools were to engage in pre-vocational (skills acquisition) studies in the Continuation

School Program (Forms 3-4), "patterned on the farming and local industrial needs of the country" (Ministry of Education, 1968).

Implementation of the Continuation School Program

Introduction

The basic idea behind the "Continuation School Program" was that pupils not destined for academic secondary schools would spend a portion of their time learning skills that would be useful to them in everyday life. Such skills therefore had to be related to what was customarily done in the local community, and, more specifically, in families--the economic unit to which the unemployable school graduate would have to return. The middle school curriculum was to include activities that were already generating a measure of financial return in the district. This essentially meant farming and local handicrafts.

Implementation

The implementation strategy involved eighteen schools. Two from each of the nine administrative regions (now ten) were selected as trial schools. In addition to internal financing UNICEF contributed eighteen sets of equipment deemed necessary for the project. The equipment supplied was for the teaching of science, agriculture (including poultry farming), home science, woodwork and masonry.

Although the "trial" schools had equipment, the Ministry of Education had not worked out how the vocational courses were to be integrated into the middle school curriculum. Should the outcomes of these subjects be assessed through the Form 4 final examination? If not, how much attention should students and teachers pay to the vocational courses?

In general, the implementation of the project was without any prescribed guidance: there was no structured curriculum, no time allocation for the vocational courses, and worst of all, teachers and head-teachers were not given special training for their new tasks (Adams & Chen, 1981). It appeared, therefore, that the whole undertaking was done with the belief that "schools would and could use their own initiative" to solve the problems that would arise (Adams & Chen, 1981). That is, schools were left on their own to devise a "relevant" curriculum, in addition to solving the problem of how to integrate the academic and the vocational curricula.

The Continuation School Curriculum

By 1972 the Ministry of Education had been able to identify about thirty-two courses which were being offered in the various continuation schools. It reported that:

> The course content has been systematically diversified to embrace some thirty-two different vocations, including vegetable gardening, crop and animal husbandry, poultry farming, cloth weaving, cane work, catering, extraction of vegetable oils, dress-making, hair-dressing, fishing, masonry, woodwork, vulcanizing, charcoal burning, salt making, blacksmithing and welding (Ministry of Education, 1976).

The above report did not mean that all 18 schools offered all 32 courses; rather they offered whatever was possible in their respective communities.

Teacher Supply

Since the teachers had no training in these various vocational subjects, schools had to resort to hiring local craftsmen in the community as "specialist tutors". Some of them even conducted a few classes (e.g. weaving) in their own studios. Even when, by 1976, the number of continuation schools had soared to about 634, the authorities had still not made any plans to train the required vocational teachers for the schools. In view of this, most of the equipment supplied by UNICEF was under-used. In one school, for instance, a UNICEF official who was assessing the program in 1972 found one incubator "lying idle" while other schools had still "not received" the allocations made to them since 1969 (Adams, Chen, 1981). This was a clear indication that, despite their open rhetoric supporting vocationalization of education, the education authorities either were not fully committed to the program or were grossly inefficient in terms of its implementation at the school level.

Coordination

To coordinate the program in the various regions, the Ministry of Education appointed regional organizers. Their major task was to visit the schools and to give advice, guidance and help. It must be noted here, that the kind of "guidance" and "help" was not defined for the coordinators. Most of these coordinators, therefore, paid only official "visits" to the schools, and wrote reports on what they saw. They rarely offered any effective help with the implementation of the program. In addition, because these coordinators were also Ministry officials, the boundaries between "advice" and "command", and between "guidance" and "prescription", were often blurred (Adams & Chen, 1981). The coordination strategy was therefore not effective nor helpful to the schools.

Failure of the Continuation School Program

By 1976 it had become clear that the Continuation School program had failed. The major reasons for this were socio-economic and educational.

Socio-economic Reasons

Although the program appeared to enjoy some "acceptance" among both students and parents, this was clearly not the kind of education the people wanted. As previously indicated, since colonial times academic education had been seen as the only way of securing a better-paid job in the modern sector; hence, the introduction of vocational (skills training) courses was perceived as an attempt to tie the bulk of the population to a rural lifestyle. In view of this, diffusion of the innovation throughout the middle school system was very slow indeed. At the end of 1976, of more than 3,000 middle schools only 21% had introduced the new program. This also indicated that Government support for implementation of the program was very weak. In a centralized system of government, such as existed in Ghana, the support of the

Government in the adoption of the program was necessary for success. But its relative inaction in this field strongly suggests that the NLC itself was not much interested in its diffusion.

Second, the increase in the number of continuation schools resulted in a demand for additional funds to pay the salaries of "vocational teachers" in the local communities who were helping to instruct the pupils. But this overstretched the government's educational budget. Since government could no longer finance the increasing cost of education at this level, communities and parents were "encouraged" to share the financing of the program with the government by providing the necessary materials (e.g. gray baft, cane, seeds, etc.) and labor. In some schools, parents were even asked by the headteachers to pay a fee each term since government had withdrawn the annual grant for the vocational courses. Because most of the parents were poor, and were not particularly interested in seeing these vocational subjects taught in schools, the program was soon abandoned in several regions, which resulted in a return to the academic curriculum. Thus, it could be inferred from this that community-financed curriculum reforms which are not supported by the population have a very slim chance of survival in Ghana or in any other developing country.

Third, one of the main goals of the program, which was to reduce unemployment, was not achieved. According to Gardner (1985), unemployment increased among middle school-leavers and moreso among the graduates of the continuation programs. Two reasons appear to have been at the root of this problem: (1) the graduates of the Continuation program had no capital to engage in self-employment; and (2) the market for graduates with some elementary skills acquired in a minor school program was not only limited but virtually non-existent. With an economy that was not expanding, the demand for additional workers was quite low especially for those with minimal skill training and no job experience. In other words, while the authorities "strongly" advocated vocationalization of education, they failed to adequately help the economy develop to the point where it could fully utilize the vocational knowledge and skills of the graduates involved.

Educational Reasons

The Continuation School program failed partly because there was shortage of vocational teachers and an inadequate supply of equipment and resources. In addition, too many vocational courses were being introduced, and the organization and coordination strategies were ineffective (Gardner, 1985; Adams & Chen, 1981).

In addition, the Ministry of Education made no effort to evaluate or monitor the programs to assess the success or failure experienced in the implementation process; this would have allowed them to devise means for possible modifications of the program. The exercise depended upon "luck" for its survival. Above all, it failed to act on the regional reports submitted by the coordinators, and to plan for any restructuring to aid the implementation process. This suggested that, like the Government, Ministry of Education officials were apathetic to the introduction of the new program.

The Ministry also failed to incorporate continuation courses into the middle school final year examinations administered by the West African Examinations Council (WAEC). Consequently, both teachers and students of the middle schools concentrated more of their time and attention on the subjects which were to be assessed at the final examinations. These were the subjects that had a strong academic orientation. There was, therefore, no motivation for schools to devote time and resources to vocational subjects which were not being included in the certificate that students had to obtain and which they needed for employment.

Finally, since no follow-up studies were conducted to ascertain the "usefulness", "employability" and "productiveness" of the continuation graduates, the Ministry of Education had no knowledge of the "relevance" or effectiveness of the entire program.

Therefore, after seven years of implementation, the Continuation program appeared to have had little if any of the impact on either the schools or the communities as was anticipated in the original goals and objectives.

But despite the lack of success with the program, the policy makers remained committed to vocationalizing the school curriculum. Hence, by 1974, both the government and the Ministry of Education were ready to introduce a new vocational education strategy embodied in the concept of the Junior Secondary School Program.

THE NATIONAL REDEMPTION COUNCIL (1972-1979) AND THE EXPERIMENTAL JUNIOR SECONDARY SCHOOL PROGRAM

Introduction

In 1969 the NLC relinquished power to the newly elected civilian government, the Progress Party, led by Dr. Busia. But he was ousted from office in 1972 by a new military regime--the National Redemption Council (NRC). The quest for a "more relevant" basic education program which was to help resolve the growing problem of the educated unemployed became one of the priorities of the new regime. In view of this, the NRC appointed an education committee, headed by Dr. N. K. Dzobo, to study the Ministry of Education's new educational proposals for introducing vocational subjects in the schools as set out in the New Structure and Content of Education in Ghana (MOE, 1974).

The Dzobo Committee and the New Education System with the Junior Secondary School Program

The following basic rationale underlying the proposed new structure was developed:

> The new proposals recognize that any system of education should aim at serving the needs of the individual, the society in which he lives and the country as a whole. In particular, the system should, in a country like Ghana, aim at instilling in the individual, an appreciation of the need for change directed towards the development of the human and material

> resources of the country. Equally importantly, it must generate in the individual an awareness of the ability of man, using the power derived from science and technology, to transform his environment and improve the quality of his life (MOE, 1974).

Stemming from this general aim mentioned above, the Dzobo committee recommended that the curriculum of the basic education course should be diversified to include both academic and vocational courses. It was an attempt to expose students to wider occupational choices, particularly with reference to rural occupations. This objective was to help those whose education would end at the basic education level, assume rural employment. This, it was argued, would reduce the growing unemployment problem among school-leavers (MOE, 1974). The committee thus recommended that the last four years of the basic education course (middle school) be replaced by a three-year junior secondary school program at which level students were to engage in studying both academic and vocational subjects. Successful graduates were to enter Form 4 of the regular secondary schools while the rest would enter the labor force.

The new education system recommended by the Dzobo Committee was as follows:

Primary education	- 6 years	-Basic Education
Junior Secondary School	- 3 years	
Senior Secondary Lower ('O' Level)	- 2 years	
Senior Secondary Upper ('A' Level)	- 2 years	
University	- 3 years (MOE, 1974).	

The new pre-university system therefore entailed thirteen instead of the previous seventeen years of schooling (this has been further reduced to 12 years since 1987).

The committee's recommendations were approved by the NRC government in 1974, and the Ghana Teaching Service (GTS--which later became known as the Ghana Education Service (GES) was established to implement the new program.

At this point, however, it is important to identify the fundamental causes of educational expansion which fostered the revival of vocationalization of education in post-colonial Ghana.

FACTORS AND EDUCATIONAL PHILOSOPHIES WHICH INFLUENCE THE EXPANSION AND CONTINUED EMPHASIS ON VOCATIONAL EDUCATION IN POST-INDEPENDENCE GHANA

Introduction

Vocationalization of the primary and secondary school curriculum in post-independence Ghana, as in other LDCs, was influenced by educational expansion, international call during the 1960s for such education in schools, educational philosophies of the 1950s and 1960s, and the functionalist and human capital theories.

Educational Expansion

The rationale underlying the expansion of education, including an education with a vocational bias in post-independence Ghana as well as in other developing nations, had three motivating factors all of which led to overproduction of school graduates within static economies. Education was seen as: (a) a human rights measure; (b) an anti-colonial device; and (c) a development strategy.

Human Rights Cause

At the end of World War II the United Nations declared that formal education should be the right of all citizens in every country. Deliberations and recommendations of the UNESCO conferences in Karachi, Addis Ababa, and Santiago in the 1960s promoted the idea of Universal Primary Education (UPE). In countries which already had UPE, including the UK, Australia, and New Zealand, this human rights concern found expression in the determination to ensure greater equality of access to secondary education (Bacchus, 1981). In the LDCs it took the form of the intent to introduce Universal Primary Education. But since it was realized that more education of the traditional type would not meet the employment needs of those countries, the vocationalization of education, even at the primary level, was seen as an answer to the universal primary education issue.

The Anti-Colonial Cause

For most of the newly independent developing nations such as Ghana, Nigeria, Kenya, and Uganda, educational expansion was perceived as a way of finally throwing off the shackles of their colonial legacy by moving from the provision of education for only a few, to education of the masses. As an example, in Ghana, over a period of a century of colonial rule only 5% of the entire population was educated by the British (Foster, 1965; Graham, 1971; Kwamena-Poh & McWilliam, 1975). Nkrumah's Accelerated Development Plan of 1951 was intended to address this gross imbalance by providing greater equality of access to education and jobs, as well as manpower development. But since there was not likely to be enough public service sector jobs for this increased output of secondary school graduates, efforts were made to broaden occupational aspirations beyond the traditional white collar jobs anticipated by those students, by including more practical subjects such as technical drawing, bookkeeping, typing and office practice, agricultural science, poultry farming and commerce, in the curriculum of school. It was also thought that even if the secondary school graduates went into the civil service, it would be useful for them to develop some appreciation of the difficulties and challenges faced by manual workers in such fields as agriculture and skilled trades.

The Development Cause

During the 1960s, the generally accepted definition of national development meant economic growth (Todaro, 1977), defined as, the capacity of a national economy to generate and sustain an annual increase in its Gross National Product (GNP) at rates between 5-7% or more (Todaro, 1977). In other words, the GNP was considered to be a primary indicator of a nation's development. Vocational education was seen as a means of improving the rate of development by providing youngsters with skills that would allow them to make a direct contribution to the economy. This was, in essence, the human capital theory of development.

This widely-held conviction led to an increase in foreign aid and the transfer of expatriate planners, teachers, engineers--individuals with specific skills or those able to impart these skills to the population--to the LDCs with the intention of generating economic development as it had in Europe through the post-war Marshall Plan (Haddad, 1981). What this ideology ignored, however, were the structural and psychological differences that existed between the LDCs and European countries. Thus, what had been successful in Europe was neither appropriate to nor would achieve the same results in the LDCs. Nevertheless, the provision of vocational education was seen as a means of developing the appropriate attitude to work which would eventually help to achieve development.

The capital, expertise, etc., transferred from the West was to be invested in the small modern sector in the LDCs, for it was this sector that was believed to have the most potential for spearheading national development. This modern sector development theory, advanced by Arthur Lewis (1955), argued that the center of economic gravity in the LDCs would shift through the on-going reallocation of labor from the traditional agricultural sector. As this happened, the LDCs would have to use production techniques similar to those used in the developed countries if their products were to compete on the world market. This would result in a need for manpower with the same type of education and technical skills as the economically more developed countries (Arthur Lewis, 1955). In other words, this development theory called for increased expenditure in post-primary education, especially at the secondary school level, to produce the required manpower for economic and national development. Also, a shift from academic to more technical training was needed.

But this approach to development, in effect, reinforced the existing colonial dual economic structure (urban-rural) in these societies and encouraged migration to the industrialized urban centers from the rural sector. More importantly, it fueled the expansion of and increased expenditure on education at all levels, especially at the post-primary levels--a measure which later came to be justified by the human capital theory. But if this human capital was to be productive, it would need the technical skills seen to be required in the anticipated shift from agriculture to industry and for the improvement of farming methods. Thus, educational expansion, caused by the above factors, greatly influenced the revival of vocationalization in the developing nations during the post-colonial era.

In Ghana, the educational expansion factors underlying vocationalization were evident in (1) the objectives of both the Accelerated Development Plan (1951-60), (2) the 5-Year Development Plan (1954-64), and (3) the recommendations of both the Kwapong and Dzobo educational committees of 1966 and 1972 respectively.

The Need for Vocational Education in Schools: The International Debate

> While millions of people from among the educated are unemployed, millions of jobs are waiting to be done because people with the right education, training and skills cannot be found....This is one of the most disturbing paradoxes of our time.
>
> R. S. McNamara, 1974

> Can education alone solve the unemployment problem?
>
> Martin Carnoy, 1980

Introduction

The most common reason among the many put forward in support of vocationalization of education in the LDCs was the reduction of unemployment among the school graduates. Vocational education was, therefore, usually introduced to help solve this explosive socio-economic and political problem. But the question often asked by the skeptics or critics of such programs, including Foster (1965, 1966), Bacchus (1979, 1986) and Lillis & Hogan (1983), is whether, in reality, the school and its curriculum were to blame for the unemployment issue or, as argued by Hurst (1981), whether the advocates were using this educational reform as a "red herring" to evade reality. In other words, while the advocates of vocational education continued to accuse the school curriculum of contributing to the problems, the critics insisted that the prevailing socio-economic structural features of the LDCs were to blame. Despite this unresolved debate, vocational education continued to receive attention in the various educational reforms attempted by the LDCs, as evinced by current attempts in India, Sri Lanka, the Philippines, Zimbabwe, Nigeria, Kenya and Ghana.

The Vocational School Proposal

In May, 1961, ministers of education from across Africa, including Ghana, participated in the historic meeting, The Conference of African States on the Development of Education in Africa, held in the Ethiopian capital of Addis Ababa. The conference drew attention to the role of education as an "essential factor in the economic and social development of the African countries, and its importance as a productive investment" (UNESCO, 1962). It also recognized the need for manpower development in scientific and technological fields, and so resolved to expand both secondary and tertiary education.

It must be recalled that the period between the late 1950s and mid-1960s saw many of these nations gaining independence from colonial rule (e.g. Ghana, 1957; Nigeria, 1961). There was, therefore, the need to produce the required personnel to fill the various positions in education, civil service and industries being vacated by the colonial expatriates. This move also portrayed the growing influence of the human capital theory.

Among the many important resolutions passed by the conference was the adaptation of education to the African milieu. In this the resolution stated:

> 1. The relationship of education to the rural environment should be given consideration from several points of view. ...education should be adapted to the environment.... Futhermore, since African economy as a whole is still essentially rural, steps need to be taken for education to produce the economic return looked for, to ensure that general education prepares the way for the acquisition of specialized knowledge, and that agricultural education is given its rightful place.
>
> 2. In view of the existing predominance of the agricultural sector in most African countries, the meeting considers that education should enable the majority of children, young people and adults to adapt themselves to the rural environment and to improve the productivity of the agricultural sector. ...the education provided in the rural areas should be accompanied by other types of education, such as vocational training and craftsmanship courses (UNESCO, 1962, p. 17).

It should be noted that these recommendations of the Addis Ababa Conference were a direct resurrection of both the Phelps-Stokes and the Advisory Committee proposals referred to in chapter two. That is, post-independence African educators were no different from their colonial counterparts in the quest for "relevant" education for Africa.

From these proposals and also from the claims of the human capital theory, there emerged at both the national and international levels both advocates and critics of vocational education, particularly curricula diversification, in the LDCs. The leading proponents were Balogh (1962) and Dumont (1962; 1966); while critics have included Foster (1966), Bacchus (1979, 1986), Lillis and Hogan (1983); Lauglo et al., (1985).

The Case For Vocationalization

The central thesis for a vocational education program advocated by Balogh and Dumont was that unemployment among the educated in the developing countries was the result of the academic nature of the school curriculum. This, it was believed, contributed to the development of hostile attitudes toward agriculture or manual labor in general, and fostered unrealistic job aspirations among students (Balogh, 1962; Dumont, 1962, 1966).

Dumont (1966) observed:

> For most African children, in town and country alike, school represents above all a means of entering the elite class. Even in the most backward areas of the bush everyone has grasped the fact that the official with clean hands (civil servant) earns more and works much less....Pushed by his parents, a peasant child quickly realizes that he can never go very far in agriculture; the only way to get ahead is to get out (p. 89).

A conversation between Dumont (1966) and a schoolboy in the Congo (Zaire) appears to confirm the above claim:

DUMONT: "What do you hope to become after school?"

SCHOOLBOY: "I'm going to become a bureaucrat."

DUMONT: "What will you eat?"

SCHOOLBOY: "Manioc and bananas."

DUMONT: "If your sister goes to school, you'll have nothing to eat, except your fountain pen" (p. 92).

The consensus among the advocates, therefore, was that the education then offered in most schools in the LDCs de-emphasized agricultural education, while it peopled the streets with "jobless and idle youths" (Dumont, 1966). They concluded that school should not detach students from their original rural world but train them rather so that they would be in a position to modernize it.

It was therefore proposed that, since the economies of the LDCs were basically agrarian and in addition between 80-95% of the population lived in the rural areas and depended upon agriculture, the essential need was the creation of technical and agricultural programs within the schools. This would eventually facilitate the development of modern agriculture which would help raise the living standards in the rural economy. The technical and agricultural skills acquired in the schools, it was argued, would prepare students for rural jobs including agriculture, fishing and crafts, and also lower their aspirations so that they would settle in the rural areas and help to transform them. This would not only halt the urban drift, but would reduce or eliminate unemployment among school-leavers. In short, the advocates, in an unequivocal conclusion, laid the blame for socio-economic problems in LDCs on the academic nature of the school curriculum. Thus, unless the curriculum was diversified to include agricultural and vocational courses, such problems would not be solved.

The governments and educators of the LDCs perceived the growing national and international support for vocational education in schools as economically "sound", "relevant" and justified. Soon, diverse forms of vocational programs were introduced into the education systems of these nations, including India, Sri Lanka, the Philippines, Argentina, Brazil, Nigeria, Sierra Leone, Kenya, Uganda and Ghana.

Despite the various goals of vocationalization in the different developing nations, still there were some commonalities which ran through almost all of them. These included attempts to:

1. Equip students with relevant knowledge and skills.
2. Make students more productive, thereby contributing to their own development and to the national economy.
3. Lower students aspirations for higher education and urban or white-collar employment.
4. Provide students with rural skills to help them settle and take up jobs in the rural sector.
5. Eliminate unemployment among school graduates.
6. Provide self-employment for graduates, and,

7. Assist students to respect manual labor, particularly agriculture.

(Foster, 1966; Bacchus, 1986; Lillis and Hogan, 1983; Lauglo et al., 1985).

The above goals, therefore, suggested that vocational education was conceived as capable of solving the sundry socio-economic problems of these societies. This was very much the colonial educators' perceived purpose of schooling. However, in the late 1960s, the assumption that the school curriculum was the cause of the socio-economic problems was challenged by those who argued that it was not to blame.

The Case Against Vocational Education

> It is widely believed that schools can readily be modified to meet new economic needs and, more particularly, to accord with the intentions of social and economic planners. On the contrary, schools are remarkably clumsy instruments for inducing prompt large-scale changes in under-developed areas.
>
> (Philip Foster, 1966, p. 165).

Based upon his research in Ghana, Foster (1966) rebutted the explanation of unemployment in the LDCs put forward by the vocational education advocates. He argued that unemployment among the educated was the result of rapid educational expansion against a relatively stagnant economy. That is, the modern sector economy was not expanding rapidly enough to absorb or create the number of new jobs needed to accommodate the thousands of school graduates each year. In view of this, vocationalizing the school curriculum would do very little to help solve the unemployment crisis. Adding to the argument, Carnoy (1980) and Bowles and Gintis (1976) contended that the presence of educated unemployed was an inherent and necessary part of the capitalist system. The creation of a reserve army of workers helped to keep down (or control) wages which, in turn, allowed capitalist employers to increase their level of profit accumulation. To Carnoy and Bowles and Gintis, then the problem of the educated unemployed could not be solved merely by vocationalization--unless capitalism itself were abolished or at least seriously modified.

Second, the existence of a dual structure in the economy (rural/urban) and its attendant wage differentials encouraged school graduates to drift into the urban centers in search of white collar jobs. This was one of the contributory causes of unemployment in these societies (Bacchus, 1979). About 4 million rural school graduates in Africa migrate to urban centers each year in search of jobs (ILO, 1988). The interview response of an educated, unemployed youth in Dar es Salaam, Tanzania, reported by Ishumi (1984) illustrates this point:

RESEARCHER:	"Why did you come to Dar es Salaam?"
YOUTH:	"...I hated the job (agriculture)....Of course it pained me most that I had not continued with higher (secondary) education. Some of my classmates at that school who did continue now have good jobs, in police, prisons, as clerks, drivers and so on. I too had to look for a job and get away....As for the job here, well, I am still in search for one--a real good one." (p. 54).

In Ghana, every year 250,000 rural school graduates migrate to the urban center (ILO, 1988). This urban migration not only increased unemployment but created other problems, including inadequate urban housing due to rapid urban population growth. The average annual urban population growth rate in Ghana rose from 3.9% between 1980 and 1985, to 4.2% in 1985-88 (World Development Report, 1989). Vocational instruction in agriculture by itself, therefore, would not induce youths to take up farming unless the existing economic structure and its pay differentials underwent a massive transformation (Bacchus, 1979).

Third, critics suggested that it was very unlikely that the centralized systems of government of the LDCs would lend full support to vocational education. And, without the political support needed in terms of finance and resources, such education was bound to fail. For LDCs, schools virtually depended upon state funding of their educational activities and approval of any new curriculum. But the problem was that these governments seemed to support academic education, which they believed would contribute more to national development by producing highly qualified trained manpower. Using the evidence of his research in Ghana, Foster (1966) argued that colonial attempts at vocationalizing education in Ghana failed due to the lack of political support by both government and the people.

He observed that:

> The paradox in Ghanaian education, has been the emphasis placed on vocational and agricultural training in all documentary sources and the relative absence of it within the actual system of education (p. 144).

This indicated political rhetoric and lack of practical support. Similarly, Wright (1986) reported that, although the Sierra Leone Government was willing to go along with diversification of the curriculum "as an important aspect of its education development strategy" it was not quite prepared to sacrifice some of its other educational goals in the name of diversification. Bacchus (1986) similarly argued that, even where vocational graduates were produced, both the private and public sector's demand for more academic as opposed to vocational education graduates forced the latter to work in jobs unrelated to their training. This is partly because the rural people could not pay for the high cost of services provided by these formally educated vocational graduates. This explains the reasons why about 80% of the doctors in some LDCs live in the urban centers, servicing the needs of the 20% of the population who live there. The city dwellers are likely to be in a better position to pay for their services (Bacchus, 1986). The critics called this a "wastage of funds and skills". Some economists, including Blaug (1973; 1980) and Woodhall (1978) who joined in the debate against vocational education, contended that investment in vocational education was likely to worsen rather than improve the socio-economic situation in the LDCs because it was more expensive to set up initially and maintain, than academic education. The former required special equipment which was expensive and teachers who were trained in those subject areas. These requirements were often unavailable or in short supply.

Fourth, critics questioned the course content of such education since those who advocated it failed to provide details about the vocational courses proposed. What kind of agriculture, for instance, should the school emphasize, and to what extent or level should it be taught? What elements in agriculture and crafts were to be considered "modern" to eliminate the possibility of the duplication of traditional methods which the children already know? Furthermore, the question of who should study vocational programs was not resolved. That is, which segment(s) of the population of the LDCs should study vocational courses and eventually move into or remain in the rural sector economy, and which segments should study academic courses for private and public sector jobs? These questions were not being answered. However, Bacchus (1986) stressed that, for vocationalization to succeed, it had to be made an integral part of the overall national development plans of the LDCs and be related to the nature of that country's development strategy. It was also likely to fail if the differential rates of pay in favor of those with an academic education persisted.

The Ghana Experience

Based upon the recommendations of both the Addis Ababa Conference and the arguments put forward in favor of vocational education by its various advocates, the Ghana Government began to perceive vocationalization as the key to the nation's development. The belief, as previously indicated, was emphasized by Nkrumah in his 7-Year Development Plan (1963/64) which called for the need to provide both academic and vocational education. The objective was to produce both high-level and middle-level technical manpower capable of contributing toward the nation's economic growth to achieve overall development. The assumption that knowledge in technology and science was relevant to economic development led to the establishment of the Kwame Nkrumah University of Science and Technology in Kumasi in 1964.

At the secondary school level, the curriculum was broadened to include commercial, technical and agricultural programs. Again, new post-secondary, vocational and technical institutions were established in certain parts of the country, such as the Kwadaso Agricultural College, Bunso Agricultural Institute, Accra Technical Training college and the Advanced Technical Training College in Kumasi. The old vocational schools at Asuansi, Mampong and Yendi were also revived to admit post-secondary school graduates. At the elementary school level emphasis was laid on school farms, gardening, and crafts which led eventually to the introduction of the Continuation School Program.

In addition to making students more productive to the economy, the new reforms also sought to make the schools (particularly at the primary and secondary levels) self-sustaining through the sale of the products which resulted from their various technical/vocational courses, and to reduce central government's educational grants.

Educational Philosophies Which Have Influenced the Development of Vocational Education Programs

Introduction

In addition to the international debate regarding the need for vocational education in the LDCs, such education was also considered philosophically justified. It was argued that general education should include both academic and practical courses in the training of the "all-round" person to assist in the progressive transformation of society. That is, general education was viewed as being incomplete unless it provided the two types of education--academic and vocational.

PRAGMATISM AND THE CONCEPT OF GENERAL EDUCATION

Pragmatists are of the view that learning should be directly relevant to the active interests and concerns which pupils have, or will face, in their out-of-school activities, in their private lives, and in their future roles as workers and citizens (Lauglo, 1985; Lauglo & Lillis, 1988). Therefore, pragmatism stresses the relevance of out-of-school education in general. It thus rejects the view that curriculum should be justified by reference to intrinsically worthwhile structures of knowledge. Futhermore, it rejects any dualism between "pure" (academic) and "applied" (vocational) knowledge (Lauglo & Lillis, 1988).

Pragmatism supports the view that learning occurs best when arising out of application to real life problems. Thus, the essence of education should be to lead individuals to solve the problems of life, which in turn leads to the transformation of both individuals and their milieu (Dewey, 1956; Hirst & Peters, 1970). In short, the implication of the argument put forward by this group of educational philosophers is that general education should include both academic and vocational education. On the one hand, pragmatism believes that problems dealing with the preparation of individuals for employment should be addressed by the school. In addition, it argues that the uses which pupils may have for tools and practical techniques in their private life should be considered in their education programs. But there has also been support for the aesthetic side of practical subjects. These views have led to a general emphasis on a practical approach to the teaching of any subject (Lauglo & Lillis, 1988).

Even in the U.S.A. curriculum thought was profoundly influenced by pragmatism and its emphasis on the importance of "useful" learning. An example is the inclusion of subjects like Industrial Arts, Domestic Science and business subjects in the high school curriculum which reflects both the educational theory of pragmatism and the mass character of the high school (Lauglo & Lillis, 1988). Similarly, the Theoretical and Practical Vocational

Orientation programs of Sweden (Gustafsson, 1986) and the Technical Vocational Education Initiative course for British secondary schools (Saunders, 1986; Röhrs, 1988) have been clear examples of the pragmatist concept of general education which was to include both an academic and agricultural or vocational focus.

POPULISM AND EDUCATION

Populism typically celebrates the importance of work as a source of moral fibre, self-reliance and civic virtue (Lauglo & Lillis, 1988). Productive physical work is, as seen from this perspective, educational in that it develops valued personal qualities. Populists view academic secondary education (and for that matter, all formal education) with suspicion because of its role in the transmission of the culture of the elite in society. Therefore, one of its concerns has been to ensure that secondary school pupils identify with "the people" (Lauglo & Lillis, 1988). Productive work was therefore to be introduced to this end; hence, the strong support for diversification of the secondary school curricula (as in Tanzania's Education for Self-Reliance program).

The populist stance focuses on secondary education that will prepare students who leave school with the requisite skills to "return to the community". Therefore, they do not want elite education, such as that transmitted through an academic curriculum, to unduly dominate the work of schools further up the educational ladder. In other words, populism suggests that the program of studies forming the school curriculum should relate to the values, attitudes, beliefs and dominant occupations of the masses in the society. Such a curriculum would not only help students at all levels of the educational system identify with their society in which they would eventually live and work; it would also make them more productive, useful and able to fit into the various types of available jobs and thereby contribute toward the development of the local community and the nation as a whole. This view gives support for subjects in the curriculum to be directly relevant to work, home and community life.

Socialism and Education

In addition to advocating equal opportunities for all to receive general education, a socialist ideology strongly supports practical subjects in the curriculum of school. This is found in the socialist concept of polytechnical education, which is rooted in Marxist philosophy. In this, there is some overlap with Pragmatism - the rejection of dualism between "theory" and "practice" (or "pure" and "applied" knowledge) and of the educational superiority of the former (Lauglo & Lillis, 1988).

The notion of praxis is central to Marxist epistemology. In other words, people learn by acting on natural phenomena, transforming them while experiencing their influence. Therefore, curriculum should seek to integrate "theory and practice" (academic and vocational). But while Pragmatism stresses the value of "experience" and "activity" more generally, Marxism holds up the educative value of productive work in particular. Hence, "education with production" has been a recurring theme in socialist rhetoric and policy (Lauglo & Lillis, 1988; Gumbo, 1986).

The slogan means that students should participate in productive work outside the school and learn directly from workers and peasants. This was evident, for instance, in China during the Cultural Revolution (O'Dell, 1986; Bacchus, 1986). Further, the goal was that real-life problems of production should be the starting point for the teaching of science. Thus, the original idea was to break down the institutional boundaries between education and productive work. The current interest in "Education with Production" in Zimbabwe (Gustafsson, 1986; Gumbo, 1986) and other Southern African countries is a less extreme example of this socialist thinking in educational policy. This theme of practical work in general education is one that socialist Polytechnical education shares with the populist philosophy of education as advanced in China by Mao, in Tanzania by Nyerere and in Cuba by Castro.

The Philosophical Influences on Vocational Education in Ghana

In Ghana, as in many other LDCs, the philosophical justification of vocationalization is that it relates education to the needs of the society. This philosophy was evident in the 7-Year Development Plan as well as in the recommendations of both the Kwapong and Dzobo committees on the country's educational reforms. Based on the premise of pragmatism, efforts were made at all levels in the education system to equip students with relevant knowledge, skills, values and attitudes in the attempt to make them more productive, and to contribute to the social, economic, political and cultural transformation of Ghanaian society. These ideas were evident in the introduction of the Continuation School Program, the Junior Secondary School Program, as well as the emphasis on vocational and technical studies at the tertiary level of the country's education system.

Vocationalization also has sought to assist students to appreciate and respect community occupations. It is a calculated attempt to get students to identify with their various communities where they would eventually live and work. This is an important aspect of the populist philosophy. This view was emphasized through the introduction of community-based occupational courses into the elementary, secondary and tertiary educational programs. For example, an agricultural science department was created at the University of Ghana (Legon) in 1965 to conduct research into the agricultural practices of the country, and to effect increases in production in this sector.

Finally, vocationalization of the country's education system has been also based on the concept of equality of education and job opportunities for all, as emphasized in socialist ideology. This objective was an effort to break down the opportunity barriers erected by colonialism, which distinguished between academic and vocational occupational structures in addition to determining who occupied what positions in the nation's socio-economic and political structure.

Theoretical Approaches in Western Societies Which Have Had An Impact on the LDCs

The contribution of formal education to economic development in the LDCs has been the concern of Western development theorists for the past three decades. This concern rested on the assumption that, since education had contributed to economic development in the economically developed countries, it was, without doubt, the only way to achieve development in the LDCs.

Formal education, it was argued, would be a fundamental agent of socio-cultural change since it would develop human capital, influence elite formation, and modernize attitudes and behavior in the general population (Almond & Coleman, 1960). In other words, important determinants of development or modernization lay in the structures of formal education. In addition, economists of the period, including Schultz (1961), Denison (1962) and Harbison (1964), contended that research provides strong evidence that education can produce the knowledge and skills needed for economic development.

The assumption of a strong correlation between education and economic development has encouraged many third world nations, including Ghana, to focus on equipping students with skills and knowledge that are considered useful and more productive in the national economy. Out of this came the further issue as to the type of "skills and knowledge" that are most likely to contribute to economic development. The question then focused more specifically on the relative contribution of a more academic education program on the one hand and a vocational education on the other. Many LDCs, after going through a first phase of expanding their existing educational services, began to share the belief that an education which develops skills and knowledge directly relevant to the jobs available in the society, is most important for the nation's economic development. Hence, efforts began to be made at a diversification of the school curriculum to include practical, or vocational courses, and to de-emphasize the regular academic curriculum. It was the conviction of most LDCs that such skills would help develop the required manpower to supply the labor force with the higher and lower levels skills needed in the pursuit of socio-economic growth.

Vocationalization has been, therefore, perceived as a quest for greater relevance with respect to the skills developed by educational institutions for the labor market. Therefore, there needed to be a better articulation between the content of schooling and the subsequent use of acquired skills, attitudes and knowledge in the world of work (Lauglo & Lillis, 1988). In other words, in addition to equipping students with relevant employment skills to enable them to secure a livelihood, education should make the students more productive at work. The market relevance assumption is also expected to help reduce the problem of unemployment among the educated in a more effective manner, because graduates would be more qualified to enter the job market.

As previously indicated, egalitarian values has been also invoked in support of vocationalization. The assumption that such education would create equality of educational opportunity--regardless of one's academic ability. Moreover, it is assumed that the gap between rich and poor students can be narrowed by providing all of them with the requisite skills for jobs. Vocationalization is also expected to reduce the sharpness of distinction between theoretical and practical knowledge and consequently manual and non-manual work (Lauglo & Lillis, 1988).

Functionalism and the Vocationalization of Education

Another theoretical support for vocational education emerged from the functional view of society which has been shared by many sociologists. Functionalists basically argue that accession to various occupational roles in modern societies is (and should be) achieved rather than ascribed (Hurn, 1985). This view of modern society therefore allowed sociologists of the 1950s and 1960s, including Parsons (1960) and Hoselitz (1960) et al., to perceive the LDCs as underdeveloped, since occupational roles were (and still are) largely undifferentiated in most cases, due to depressed market conditions. In addition, individuals in these societies were usually selected for jobs on the basis of ascription rather than achievement. The functionalist view of society tends to subscribe to a meritocracy. It argues that occupational roles should be achieved on the basis of merit rather than passed on from parent to child. Therefore, the children of the poor should have equal opportunity to achieve high status with the more privileged children in society. However, those who are unable to achieve such high positions on the basis of merit, should be channeled into vocational and trade education or job training. This, it is believed, will create middle-level skills and help raise the incomes of such groups (Hurn, 1985).

The meritocratic theory implicit in Functionalism has, since World War II, influenced governments of Western societies (later the LDCs) to try and increase equality of opportunity by expanding education at all levels, particularly post-primary education, and by introducing universalistic rules for employment intended to discourage nepotism and legislating elimination of discrimination on the basis of religion, race or sex (Hurn, 1985). The focus of the theory is on ability and effort rather than privilege and inherited status.

The theory also argues that the modern society is an expert society, one that depends pre-eminently on rational knowledge for economic growth, requiring more highly trained individuals to fill the majority of occupational positions (Hurn, 1985). In other words, an increasingly meritocratic society is not only morally justified, but it is also a more rational and efficient society. According to this line of reasoning, formal education therefore performs two crucial functions. First, it is responsible for the creation of new knowledge. Since research activities of universities and colleges produce the new knowledge that facilitates economic growth and social progress, the expansion of such education is justified. Second, extensive schooling equips individuals with specialized knowledge and skills that can no longer be acquired through the family or on the job (Hurn, 1985). A highly specialized division of labor makes vocationalization of formal education necessary.

Conversely, it is also argued that, if schools cannot teach the highly specific knowledge and skills required by an increasingly large number of jobs, they can provide the foundation of general cognitive skills that permit effective learning of more specialized knowledge and skills (Hurn, 1985). In short, the theory argues that the crucial function of schools is not so much to teach specific and useful vocational skills, but rather that schooling represents an efficient and rational way of sorting and selecting talented people so that the most able and motivated can attain the highest status positions (Hurn, 1985). Therefore, it is this selection function--the need to differentiate individuals in terms of skills and training to adapt them to the occupational hierarchy and division of labor--that provides the rationale for vocational and academic programs in schools.

However, since the late 1960s the functionalist view of the role of schooling in the society has been challenged by Neo-Marxists and some non-Marxist conflict theorists. Among the former conflict theory are Frank (1965), Bowles and Gintis (1976), and

Carnoy (1974; 1980). Among the leading exponents of non-Marxist conflict theory is Randall Collins (1979).

The Neo-Marxists Interpretation of Vocational Education and Schooling

According to the neo-Marxist school of thought, schools serve the interests of the capitalist order in modern society, and also reproduce the values and personality traits necessary in a repressive capitalist society (Hurn, 1985). In *Schooling in Capitalist America*, Bowles and Gintis (1976) argue that the educational system reinforces class inequalities in contemporary society. For example, in the USA different social classes usually attend different neighborhood schools. Thus, both the value preferences of parents and the varying financial resources available to different communities mean that schools catering to working class students will teach different values and different personal qualities than schools serving higher-status populations (Bowles & Gintis, 1976). They stress that schools in lower class communities tend to emphasize rule following, punctuality, obedience to authority and provide minimal discretion in choice of tasks. In contrast, schools that prepare students for elite positions encourage them to develop some capacity for sustained independent roles, to make intelligent choices among many alternatives, and to internalize norms rather than follow external behavioral rules (Bowles & Gintis, 1976).

Consequently, the Neo-Marxists categorically reject the functionalists' assumption that schools are efficient in selecting talented people. Instead, they argue that schools work to convince people that selection is meritocratic (Hurn, 1985). For instance, selection for particular programs within a school must appear to be made on the basis of ability and intelligence using such criteria as IQ tests and grades (Hurn, 1985).

But these criteria, they argue, mask the fact that success in schooling, and of course, success in life, is strongly related to social class and shows no indication of becoming less closely related over time (Hurn, 1985).

In their view, it is essential for the legitimacy of the capitalist order that the population be convinced that people in high-status positions do deserve these positions, that they are more talented and harder workers than others. Schools, they claim, are an essential institution for helping to establish this legitimacy.

The Neo-Marxists, therefore, argue that educational reforms alone cannot reduce social inequalities. In other words, vocationalizing education in any form, and under any conditions, is not likely to resolve the social and economic inequalities among the different social groups. Rather, it is a deliberate attempt on the part of the dominant groups to ensure social reproduction, since their children are more likely to receive university education to assume highly paid and respectable positions, while those from the working class groups pursue vocational studies to ensure their position as laborers, masons, carpenters and generally low-paid workers.

As an example, in the LDCs, including Ghana, it has always been a common practice among authorities who advocate vocationalization of education to educate their own children in independent or private schools, which follow a strictly academic curriculum. They do so in order to avoid having their children "waste time" learning practical courses in the more poorly financed public schools.

According to the Neo-Marxists, the premise of liberal educational reform, which suggests that educational expansion, improved schooling, and vocationalization of the curriculum can create equality of opportunity, is therefore false. Instead, they contend that social inequalities can be resolved only when capitalism is abolished (Hurn, 1985).

Similarly, in the Credential Society, Collins (1979) rejects the functional supposition that credentials determine access to desirable jobs, because most of them are not necessary qualifications for effective performance on the job. Instead, Collins maintains that while some credentials may be necessary for any individual to obtain a particular job, from the point of view of society as a whole, the system of job allocation is an irrational one. It is irrational because large numbers of individuals are excluded from many occupations they could perform quite adequately, solely because they lack appropriate credentials. Again, many individuals spend a great deal of unnecessary time in educational institutions acquiring credentials that will entitle them to scarce but not generally very complicated jobs (Hurn, 1985). Collins believes that such an irrational system persists because employers and educational institutions have vested interests in steadily raising levels of educational qualifications required for jobs. In addition, this emphasis on credentials is sustained by the belief in the "myth of technocracy": the myth that jobs in modern society are rapidly becoming so complex that only people with high levels of sophisticated cognitive skills can perform them adequately (Hurn, 1985).

On this view, vocationalizing education, based upon the myth of the expert society (technocracy) as advanced by Functionalism, is unacceptable. Credentials alone cannot be employed as the ultimate requirement for measuring one's ability to perform a particular job efficiently. Satisfactory job performance can be gained through on-the-job training. Like the Neo-Marxists, Collins argues that vocational education in the schools serves the interests of the ruling or dominant groups of the society (Hurn, 1985).

Influence of Functionalism on Vocationalization in Ghana

In Post-Independence Ghana, the equality of opportunity view of Functionalism was translated into the introduction of universal primary education for all children in the country. In addition, vocationalization of the school curriculum has served as a screening device to help individuals develop in areas where they are considered to be most talented. At the tertiary level, science and advanced technical courses have been emphasized as well as research in the universities to improve the rate of socio-economic development of the country.

The Human Capital Theory and Vocational Education

> ...a country which is unable to develop the skills and knowledge of its people and to utilize them efficiently in the national economy will be unable to develop anything else.
>
> Harbison, 1964.

The human capital theory, developed within the functional paradigm by economists of the 1960s, including Schultz (1961), Denison (1962), Becker (1964), and Harbison and Myers (1964), argues that investment in human capital through formal education produced the knowledge and skills which yield reasonable future economic returns in the form of increased earnings and labor productivity at both the private (individual) and national levels.

For example, writing in the early 1960s Schultz (1961) reasoned that, although people acquired useful skills and knowledge through schooling, it was not obvious to many that these skills and knowledge were a form of capital, and that this capital was, in substance, partly a product of deliberate investment. This type of capital, he continued, had grown at a much faster rate in Western societies than non-human or conventional capital. Its growth, therefore, largely explained why these societies were more economically developed than the LDCs.

The earliest research conducted by Schultz showed that between 1900 and 1956 the growth of human capital increased more rapidly than that of reproducible physical capital in the USA. His work also revealed that the allocation of resources to formal education increased approximately three and a half times, more than consumer income and the gross formation of physical capital within the same period. In other words, formal education had been an important means of developing human capital for economic growth.

Subsequent research by Denison (1962) attempted to account for the residual growth in the increase in GNP. He attributed improvements in labor productivity mainly to the educational improvements which had taken place in the work force. This was further confirmed by the work of Harbison and Myers (1964) who suggested that increasing the per capita spending on secondary and tertiary education would lead to higher levels of per capita income in the country. The basic assumption, therefore, was that years of schooling, or additional training completed, were proper indices of an individual's potential productivity. Though a number of economists have questioned the methods used to calculate the degree to which education has contributed to economic growth (Simmons, 1980), these studies plainly established that educational expansion was linked to the growth of GNP in the

U.S.A.

Research carried out in the LDCs revealed even stronger evidence of a causal relationship between education and economic growth. (Simmons, 1980; Psacharopoulos, 1972). As a result, Psacharopoulos suggested to the World Bank that LDCs should consider human resource development through vocationalization of the curriculum as central to their development strategies. His 1985 research on Colombia and Tanzania later reversed this claim somewhat--based on the evidence that became available. A further extension of the relationship between education and increased productivity was undertaken by Harbison and Myers (1964). They attempted to establish a relationship between the expansion of higher education in the scientific and technical fields, and economic growth. They concluded that investments in such higher education made significant contribution to economic growth.

At the lower levels of the educational system, vocational education again began to be stressed as a potential tool for the production of middle-level manpower needs. Until the early 1980s, the World Bank was ready to lend funds only in support of what it termed "relevant and productive" education in the LDCs. (Woodhall & Psacharopoulos, 1985). This decision meant that projects most likely to be funded were those dealing with vocational education. From 1963 to 1976 about 40% of total World Bank education lending was for vocational and technical education at the secondary and post-secondary levels (World Bank, 1991).

As a result of the work of these researchers, coupled with the pressures from the local elite groups, educational expansion shifted from the primary level to the secondary and tertiary sectors. For instance, the aggregate increase in enrollment for the LDCs from (1950-70) was 142%, 182% and 183% in the primary, secondary and tertiary levels. Between 1950 and 1970 total enrollment growth increased by 259%, 172% and 163% for Africa, Latin America and Asia respectively (Bacchus, 1981; Todaro, 1977; Coombs, 1985). In Ghana, for example, between 1960-74 the number of primary schools increased from 3,425 to 6,843, while the secondary schools increased from a mere 59 to 162. Also, the enrollment of the former increased from 478,100 to 1,014,964, while that for secondary schools rose from 16,577 to 68,489. The period between 1950 and 1970 has, therefore, been rightly described as the "golden era" of formal education (Todaro, 1977).

But with this rapid expansion of education, education policy makers became concerned that an educational program was needed that could transform a lowly-skilled person into a highly-skilled individual, thereby raising his or her productivity and earnings. According to the supporters of the theory, total output will increase with the increased provision of education because of the increase in productivity among formerly uneducated workers. This would make the distribution of earnings more equal and eliminate unemployment--with each individual being rewarded on a meritocratic basis.

But, argued Thurow (1972), what the theory overlooked was the fact that, unlike the USA, the labor market of the LDCs was largely job competitive. In other words, it was limited in size and rate of expansion. Therefore, training of too many skilled personnel could result in economic crisis due to an overproduction of skilled workers. Woodhall (1978) also warned that heavy investment in education could worsen the economies of the LDCs, since such measures would draw capital away from other sectors (e.g. health and transportation) and this would deprive those sectors of resource inputs required for economic growth. Until the mid-1970s this was the situation--one of increasing financial allocation to education--which characterized most LDCs. For example, during this period governments of the LDCs, including Ghana, allocated between 25-30% of the total national budget to education. (Todaro, 1977; Bacchus, 1979).

The human capital theory, despite its numerous deficiencies, succeeded in capturing the attention of politicians, policy makers, educationalists, aid agencies and governments of both North and South (DCs and LDCs). One of the outcomes was a recognition of the need to provide for basic skills training among those at school. H. E. Wyatt, Chairman of the Canadian Chamber of Commerce, as quoted by Livingstone (1985), noted:

> We must readjust the value system of our society including the parents, the pupils and the educators. We must gear more of our thinking toward encouraging basic skills training.

On the global scene the 1960s saw a noticeable shift of emphasis from the Arts courses (academic-oriented) to business studies, technical training and vocational courses. Employers began to hire graduates from all levels of the education systems with business and mathematics or science backgrounds. In Ghana, the 1960s saw the genesis of various business and commercial schools. In the secondary schools, the Ministry of Education, on the advice of the government, added commercial subjects--typing, commerce, accounting and agricultural science--to the curriculum. The irony, however, was that secondary schools which had farm lands to provide some agricultural training (demanded by the curriculum) failed to receive the necessary agricultural tools. These were given, due to influential politicians, to the city schools which had no lands available for farming. As a result, the tools were kept under lock and key.

Following the successful campaign by the human capital theorists, the LDCs, including Ghana, Nigeria, Kenya, Sierra Leone, India and Sri Lanka, adopted a policy of vocationalization, particularly curricula diversification, largely due to political and socio-economic pressures, including unemployment among the educated.

The governments believed in the theory's assumption that, the acquisition of skills would enhance national and regional development through increased labor productivity and efficiency at work. Though the extent or level of skills development was not specified, it was believed that such skills would also help the performance of both technical and managerial functions. It was also assumed that such programs would reduce unemployment either by making school-leavers more employable on the job market, or by rendering them capable of engaging in self-employment. This claim of the theory continues to underlie almost all vocational programs in the LDCs, including the current JSS program in Ghana (Foster, 1965; 1966; Bacchus, 1979; 1986; Lillis & Hogan, 1983).

Influence of the Human Capital Theory in Ghana

Like many other LDCs, Ghana's policy makers accepted the human capital theory as a means of solving the country's socio-economic problems. Education at all levels is perceived as a useful investment, expected to yield profitable returns for students and the country as a whole. Thus, in the 7-Year Development Plan education was seen as "an economic activity" required to spearhead development in the country. Acceptance of the human capital theory led to secondary education expansion and vocationalization of both the elementary and secondary school curriculum. It also led to the establishment of both government and private business and commercial schools throughout the country.

Conclusion

The need for educated manpower, increased numeracy and literacy among the people to aid in the political and economic development of the country, and the desire to make education and students relevant to society, contributed to the revival of vocationalization of education in post-colonial Ghana, as well as in other LDCs. However, the practical implementation of vocational education in the LDCs has so far been unsuccessful due to certain socio-economic and educational problems. In the next chapter some of these constraints will be examined.

CHAPTER IV

IMPLEMENTATION PROBLEMS

Introduction

This chapter discusses the most common problems associated with the practical implementation of vocational education in the post-colonial era of the developing nations. These constraints are grouped under two headings: political and socio-economic and educational.

Political and Socio-Economic Problems

According to Bacchus (1986) the major political factor contributing to the failure of the vocationalization attempts

> might be due largely to the inability of these countries to grapple effectively with the basic problems of their under-development rather than the inherent futility of this approach (p. 16).

He observed that, currently, about 1 billion persons in the LDCs live at a sub-marginal level of existence; 500 million suffer from malnutrition, and 40,000 children under five die every day from such preventable diseases as hunger, thirst and illness. He cited the 1985 Ethiopian famine disaster which claimed about 350,000 lives to confirm his point, and further warned that the possibility of such disasters recurring are quite real. He argued that continued financing of both academic educational expansion and modern sector developments, intending to fill jobs that carry substantially higher wages and a better standard of living--at the expense of the vast rural sector and its large destitute population--only widened urban-rural disparities. This increased underdevelopment problems in addition to giving priority to those with academic rather than vocational skills. Furthermore, even with the increased oversupply of school graduates with the necessary academic qualifications required for the limited modern sector jobs, the pay differential in favor of academic graduates has persisted into the current post-colonial era.

However, Bacchus (1936) attributes this pay anomaly to the powerful influence which those in certain positions of power and influence in the society exert on political leaders, especially through their well organized professional associations or trade-union groups. In contrast, those who earn their living in the traditional sector of the economy have been relatively unorganized and thus tend to have less influence on the political decision makers (Bacchus, 1988). Therefore, income differential issues resulting from the under-development problem would continue to thwart efforts to vocationalize education in these societies.

The capital-intensive nature of available industries and their import-substitution policy also restrict employment to only a few skilled graduates. Many of these import-substitution industries tend to import almost all the required components for assembling such products as TV sets and radios; hence, very few technical or vocational personnel are usually required to supervise the assembly process (Bacchus, 1988). In several cases, the majority of the supervisors employed possess academic rather than technical qualifications. De-emphasizing labor-intensive measures therefore made vocationalization an unattractive educational route to many students.

The Definition Problem

Clearly-defined aims and objectives of educational programs are vital for their successful implementation, since these could help implementors know what the programs are about and what to expect as outcomes. The advocates of vocational education proposed the introduction of agriculture, craft and technical courses into the school curriculum. These courses were to be looked upon as pre-vocational ones, which implied that such education did not purport to give complete training for entry into the occupations concerned but rather provide preparation for such training.

However, in almost all the pre-vocational programs found in the LDCs (including the current JSS program in Ghana) the dominant rationale supporting its introduction has been the goal of assisting graduates to enter into employment--a remedy for youth unemployment. In other words, it is expected that pre-vocational education--like vocational training--would give direct advantage to its graduates in their access to work in the areas of specialization (Lauglo & Lillis, 1988). The distinction between pre-vocational and vocational is therefore unclear. According to Lauglo and Lillis (1988) one can find varying perceptions and expectations among different concerned parties in this respect.

There are those who perceive pre-vocational education as "a widening of general education"; those who view it as a broad familiarization and preparation for further training; and those who see it in effect as "preparation for work". But even where the concept is restricted to prior preparation for "further" training (apprenticeship), it must be noted that the viability of such programs depend on how far such opportunities are available to carry out these programs effectively, and whether pre-vocational students would eventually make use of these training opportunities.

The unclear definition has led to the provision of varying degrees of vocational education in the schools. In Colombia, Psacharopoulos found a "multi-track" system of diversified education in which students rotate throughout vocational options, then focus on one and finally specialize in a particular skill (e.g. woodwork)--all the while taking academic courses along with their vocational studies. In Tanzania, he discovered a "uni-track" diversified system which restricted students to one vocational topic in a specialized physical setting (Psacharopoulos, 1985).

In Sierra Leone, Wright (1986) observed that:

> schools were left largely to their own devices in the matter of what was to be taught as part of a diversified curriculum. The number and combination of "diversified subjects" offered, varied widely from school to school, and no guidance or assistance was provided to help schools develop suitable content for each of these subject areas (p. 19).

The conceptual problem has, therefore, generated different interpretations of the concept of vocational education in the LDCs. But in the main, Lillis and Hogan (1983) identified four which included:

(1) Diversification of the Whole Formal Education System. In this model attempts are made to implement overall ideological goals through the reorientation of student attitude to both society and work in socialist countries by means of structural changes in educational systems. For example, the policy of work/study in China (Bacchus, 1986; Unger, 1982), Education for Self-Reliance in Tanzania (Nyerere, 1967; Coulson (ed.), 1979), Vocational Education in Russia (O'Dell, 1986), Cuba Countryside Schools (Bowles, 1971; Dore, 1975).

(2) Parallel Vocational Systems. This involves a technical or agricultural school system which runs parallel to the dominant academic model. This often attempts to reorientate students' aspirations but "the magnet of the academic schools destroys many of the desirable goals of such initiatives." (Lillis and Hogan, 1983).

(3) Components of a Core Curriculum. These endeavor to create a compulsory vocational component of a Core Curriculum, such as the Junior Secondary School Program in Ghana (Adu, 1986; Gardner, 1985), pre-vocational studies in Sri Lanka (Dore, 1975) and Industrial Education in Kenya (Lauglo, 1985). The stress here is on pre-vocational and attitudinal training.

(4) Non-Formal Systems. These are low-cost, non-formal innovations which offer pre-employment, out-of-school training programs for post-primary school-leavers,

> as practised in the Village Polytechniques in Kenya (Anderson, 1970) and the Production Schools in Panama and Barrio High Schools in the Philippines. (Lillis and Hogan, 1983).

These various interpretations of vocational education have resulted in a lack of clear focus in these programs which has affected their successful implementation. Each approach to vocationalization of the curriculum seems to stress something different. The result was that, even in one school system the content of the program tended to differ from school to another. On the other hand, it could also be argued that, given a clear definition of such programs, a number of important questions will still remain: Who defines vocational education and its expectations, and for which segment(s) of the society? Is vocational education for all secondary school students (even as theoretically embodied in the aims of Ghana's JSS program) or just for some students? Are the ambiguities characterizing the conceptual issue a deliberate camouflage by which advocates use education as a social reproduction tool?

Financing

The cost of implementing vocational programs has been found to be higher than the cost of academic education programs (Psacharopoulos, 1985; Lillis and Hogan, 1983; Bacchus, 1986; Lauglo, 1985; Foster, 1966; Woodhall, 1978; Blaug, 1973). As an example, Lauglo (1985) reported that Industrial Education (IE) in Kenya was twice as expensive as the academic courses, due to small classes, the high cost of equipment and its maintenance, and the additional teacher salaries involved. According to the Ministry of Education in Ghana, the JSS program was about five times more expensive than the former middle school course. This, of course, confirms the argument that, since vocational education is introduced mostly in times of economic recession and high unemployment, it is not reasonable to think that the same economies (even with foreign aid) can finance the high cost of these types of programs (Lauglo & Lillis, 1988). The inability of the LDCs to meet the higher cost of vocational education renders such programs dependent, to a large extent, on foreign aid. For example, during the 1980s international assistance to vocational and technical education averaged about $600 million annually, of which the World Bank provided 45%, bilateral agencies 30% and other multilateral donors 25% (World Bank, 1991).

However, because the aid is often tied to certain political conditions (e.g. purchasing equipment from specific countries), donors tend to dictate implementation policies and goals of such programs. In some cases the aid is given if and when the recipient government is "willing" to embark upon introduction of vocational programs. Furthermore, negotiating for aid can be a long-drawn out "battle" between donors of the project and the recipient country. Wright (1986) observed this situation in the Sierra Leone case:

> the project negotiations between the World Bank and Sierra Leone was a long-drawn out affair lasting almost 5 years....sometimes

> funding agencies and recipient countries operate at cross-purposes over policy with bizarre consequences for implementation (p. 20).

In addition, it was becoming increasingly evident that many such projects experience a downward spiral once large-scale external funding ends. This, of course, has devastating consequences if the project is on a nationwide scale as, is the case of the current JSS program in Ghana. The problem of financing has been evident in Argentina (Gallart, 1986), India (Ray & Sacheti, 1986), Sierra Leone (Wright, 1986), the Caribbean (Chin Aleong, 1988), and Nigeria (Okpete, 1986).

The above problems are further exacerbated by the diverse constraints prevailing at the school level.

Educational Problems

General implementation of vocational programs at the school level faces several problems related to planning and organization, lack of equipment and resources, curriculum development, teacher development and supply, and evaluation and monitoring strategies.

Planning and Organization

The lack of qualified personnel required for planning and organizing such projects and designing appropriate implementation and administrative strategies often presents a real problem. Ineffective strategies have not only caused wastage in resources usage; they have resulted in ill-defined roles and personality or status conflicts in the implementation hierarchy. The reason is that the implementation process becomes a "top-down" strategy in which a few people at the top issue orders in a "one-way" system of administration. This causes apathy and anger among the lower ranks in the hierarchy, who therefore refuse to supervise the implementation in the school setting. Furthermore, the planners tend to leave out the provision of regular and adequate supplies of resources and materials in the planning stages; hence, the inability to sustain a continued supply of required equipment has become a factor contributing to the demise of many vocational programs. In most cases, shortage of such materials has resulted in teachers returning their focus onto academic courses, as in Sierra Leone (Wright, 1986).

In other situations, the lack of experts available to assemble the advanced equipment in the schools also becomes a problem. Wright comments on the Sierra Leone case:

> technical and commercial equipment supplied to some schools remained in packing cases for one or two years because the skilled manpower for installing them was lacking in these schools (p 23).

Additionally, because planners fail to make provision for the maintenance of the equipment, most of it soon becomes non-operational. This problem is very likely to affect the JSS implementation in Ghana since no maintenance units have been set up to repair broken tools. Lack of effective planning and organization is, therefore, a great hindrance to the implementation of vocational programs of instruction.

Teacher Supply

Teacher development and supply, particularly vocational teachers, has also been an important contributory factor to the failure of these programs in the LDCs. The significance of the classroom teacher to the implementation process is obvious, as articulated in the National Policy on Education, Ministry of Education, Nigeria: "...no education system can rise above the quality of its teachers" (Okpete, 1986). However, it appears that authorities concentrate more on the goals and anticipated outcomes than on the supply of qualified teachers. In almost all the LDCs where vocational programs have been or are being introduced, teacher supply problems prevail. In some cases, while the school curriculum is diversified, the teacher training curriculum either remains the same, or embarks upon a different form of vocationalization than that which has been implemented in the schools.

Wright (1986) observed this in Sierra Leone:

> while most project schools still operated mediocre versions of traditional craft-based syllabuses in woodwork and metalwork, the teacher education programs embarked on an innovative and "integrated approach to technology known as "design technology' (p. 24).

The teachers produced are therefore unable to teach the vocational courses in the schools. The dearth of vocational teachers is therefore an obvious sign that implementation of the practical courses will continue to meet with failure.

Evaluation and Monitoring

In education evaluation and monitoring strategies generally tend to be neglected in the implementation exercise, and this applies in particular to vocational education programs. The "who", "how" and "what to evaluate" in these programs are often left out of planning discussions. This deficiency leaves the whole exercise to run on the assumption that, perhaps by some miracle, the goals of the program will somehow be achieved. Lack of evaluation and monitoring, thus plunges the entire program into a hopeless future, simply because, though openly advocated, the educational authorities themselves privately continue to believe in the superiority of academic over vocational education in the social, economic and political development of the LDCs. In cases where evaluation has occurred, little or no attention is paid to the findings in an attempt to modify strategies, while authorities continue to focus on the goals and outcomes of the program. In short, there is often no effective feedback which is used to improve the implementation process.

The above educational problems are central to almost all vocational programs in the LDCs, particularly with the current JSS program in Ghana. It appears therefore, that the charge by critics of this type of education, that it is unable to solve the socio-economic problems of the LDCs is justified, as indicated by some of the empirical research evidence conducted thus far on vocational education.

Research Evidence

Research evidence produced by the World Bank and other agencies has shown that vocational education is incapable of lowering the aspirations or changing the attitudes of pupils towards manual work. Even more important is the fact that it has been unable to solve the unemployment problem among school graduates in the countries studied.

First, Psacharopoulos's research in Columbia and Tanzania (1985), carried for the World Bank, focused on the question of whether the introduction of vocational curricula into schools has resulted in any difference between vocational and academic students in terms of:

(1) Returns to investment in the diversified curricula;

(2) Reducing the demand for post-primary education;

(3) Inducing students to enter employment early;

(4) Providing pre-vocational education which would contribute to a reduction of unemployment;

(5) Social rates of return; and

(6) Costs (Psacharopoulos, 1985).

With respect to the first criterion, he found that, in both countries there did not appear to be a significant marked relationship between vocational education and economic return. For instance, in Tanzania it was discovered that academic bias exhibited the highest rate of return (6.3%), while agriculture produced a 5.4% and technical bias yielded a 1.7% return (Psacharopoulos, 1985).

The evidence for (2) also indicated that the introduction of vocational education has not led to a reduction in the desire of secondary students to continue with some type of formal education. Thus, vocational education appeared to be used in the same way as academic studies, i.e., simply to gain qualifications for further academic study (Psacharopoulos, 1985).

Regarding (3), the evidence from the two countries showed there was no difference in the employment rate between those who studied academic courses and those who followed vocational courses (Psacharopoulos, 1985).

For (4), and perhaps the most important in this context, evidence from Columbia disproved the hypothesis that unemployment rates would be lowered and job search periods shortened for vocational graduates. Indeed, Columbian vocational graduates were found to experience significantly longer periods of unemployment (26 vs 21 weeks) than academic graduates. In Tanzania, one year after graduation, 13% of the academic graduates were still looking for work, while the percentage for technical, commercial and agricultural graduates was 8%, 15% and 16% respectively (Psacharopoulos, 1985).

Evidence in relation to (5) did not support the claim that vocational education could be justified on the basis of a greater economic pay-off than academic education. For instance, in Tanzania, the academic bias in education produced the highest rate of return (6%) as against 2-4% for programs with a vocational bias.

Finally, the research showed that vocational education was more expensive than academic education. In Tanzania, the annual unit cost of training students in agriculture, was 3,449 shillings, compared to 2,888 shillings for academic programs. Again, government financed recurrent costs were about 34% more expensive than academic schools (Psacharopoulos, 1985.).

The evaluation of Kenya's Industrial Education (IE) program , carried out by Lauglo and others (1985) for SIDA (Swedish International Development Authority), also indicated, first of all, that one year after "O" Level Examinations the IE students possessed no advantage over others in finding employment. In addition, it appeared that more IE graduates worked in unrelated jobs, while barely any of such graduates were self-employed.

Second, the report stated the IE was more expensive than academic courses. The cheapest IE subject--Power Mechanics Technology--was about 2½ times more expensive than science and 8 times more expensive than mathematics, in terms of initial development costs per student place (Lauglo, 1985). Lauglo, however, concluded that the program did have an effect on students' occupational aspirations, because most of the IE students preferred to secure jobs related to IE courses studied

(Lauglo, 1985). In other words, this claim seemed to confirm Balogh's suggestion that students who undertook vocational education at school were more likely to opt for it after graduation.

Similarly, Chin-Aleong (1988) reports of the findings of a 1982-83 labor market follow-up study of secondary school graduates conducted by both the Ministry of Education and the Central Statistical Office of Trinidad and Tobago. The principal objective of the Ministry of Education study was to determine if there were marked differences in the labor market performances and perceptions of school-leavers, which could be attributed to the curriculum or the stream pursued. The Central Statistical Office objective looked at the job performance of 1977 graduates from the entire secondary system--the diversified curriculum schools and the traditional secondary schools (Chin Aleong, 1988).

The first study focused on graduates of the specialized crafts programs. The concerns questioned: Were they finding jobs which were related to their training? Were they more quickly absorbed into the labor market? Were they better disposed than other graduates to find work? Did they command higher initial salaries? Were they satisfied with their jobs? (Chin Aleong, 1988).

According to the report, the specialized crafts graduates fared better than the other graduates in all areas above but the fifth--though the statistical differences were not significant.

For example, while the specialized crafts graduates gained employment after about eight months following graduation, it took the academic graduates about 12 months. In terms of earnings the starting income level was $634 (Trinidad/Tobago dollars) for the crafts graduates and $614 for the academic graduates. However, about 62% of the males and 46% of the females crafts graduates surveyed, pointed out that their training bore no relationship to their first jobs. In terms of cost, vocational/technical programs were found to be more expensive than academic programs. For instance, the annual cost of a teacher's salary for training a vocational/technical student was $3,233 as against $3,110 for an academic student, while the total cost of producing a successful specialized craft graduate amounted to $83,684 as opposed to $14,150 for the 'O' level academic student (Chin Aleong, 1988).

On this first study, Chin-Aleong concluded that the marginal gains or advantages held by specialized crafts graduates in all areas cannot justify implementation of the diversified program. This is reinforced by the fact that over the 5 years (1977-1982), less than 5% of the crafts students have been able to gain a full GCE/CXC "O' level and the National Examinations Council (Craftsmen) diploma or certificate. Against this, over 50% of the academic students were successful in the GCE/CXC examinations, suggesting that the traditional secondary schools were more productive in the area of imparting cognitive skills (Chin Aleong, 1988).

In the second study, the Central Statistical Office found that 28% of the graduates of academic programs, as against 23% of those from the diversified curriculum programs, were in gainful employment. In terms of cost, it was discovered that capital cost per student in the diversified program was 2 1/2 times more than the academic program. Again, the cost per student per annum at the schools with diversified programs were $3,870 as opposed to $2,562 (Chin Aleong, 1988). More importantly, the study discovered that the diversified program had not lowered students' job aspirations as expected. Based on these findings, Chin-Aleong concluded that "vocational education might be theoretically (intuitively) correct but so far it has been shown to be empirically wrong" (Chin Aleong, 1988).

Ray and Sacheti (1986) reported somewhat similar findings by the National Council of Educational Research and Training (NCERT) of India. The study, entitled Post-Secondary Pursuit of the Students of Vocational Spectrum Studies was conducted in the Karnataka, Maharashra and Andhra Pradesh regions (Ray & Sacheti, 1986). NCERT discovered that in each of the three regions the percentage of vocational graduates who pursued further academic education was 30%, 59% and 40% respectively. Second, commerce-based vocational courses had fewer employment opportunities for their students than academic oriented programs. Finally, vocational programs were more expensive than the academic courses. Ray and Sacheti concluded that further studies were needed to establish the benefits of vocational education in that country.

Gallart (1986) also reported that the cost of vocational education in Argentina was about 60% higher than academic programs. She argued that academic education would continue to dominate the school curriculum in Latin America "as long as the private rate-of-return of subsidized higher education remains high."

Based upon these research findings, the 1990 World Bank policy paper concluded that:

> The extra resources used in many countries to replace part of the academic curriculum with a few vocational courses would be better invested in improving achievement in the academic curriculum or in increasing access to such education. Those "diversified" programs are no more effective than academic secondary education in enabling graduates to enter wage or self-employment. The limited training delivered in diversified programs produces equally limited skills and does not much change student aspirations for higher education and white-collar employment (pp. 9-10).

The Bank further argued that the most cost-effective use of public resources to improve the productivity and flexibility of the work force was the "investment in general education at the primary and secondary levels." In addition to generating broad benefits to society, the Bank contended that general education directly increased worker productivity and increased the access of the poor and socially disadvantaged groups to training and wage employment. It argues that, in Peru, workers with a complete secondary school education had a 50% greater chance of receiving in-service training than those with primary education alone. Again, in Nigeria the Bank observed that 70% of the proprietors of urban informal sector firms engaged in radio and television repair had some secondary education.

As a result of the doubts raised with respect to the socio-economic returns of vocational education, the Bank's financial support for such programs has declined considerably since the late 1970s. For example, as a share of education sector lending, support for vocational projects declined from 40% to 30% between 1977-1988 while lending for primary education increased. Support for agricultural education also declined from 25% of all vocational lending to 13% for the same period; but it has risen to 26% in recent years (World Bank, 1991).

In short, the case presented by critics, in addition to the research evidence provided, seems to leave little doubt that investment in vocational education is an economically questionable venture.

Observations

The following observations are made concerning the influence of: the vocational educational debate, the philosophical justifications, the human capital theory, and the research reports on vocationalization of education in the post-colonial era of the developing nations.

The Debate

Concerning the debate on the school and its curriculum, it is true that Balogh's thesis had some serious flaws as pointed out by Foster, Bacchus and others. Yet it is equally true that, as he stated, experience in school and the academic nature of the curriculum do contribute to a disdain for manual work and also shape the attitudes and aspirations of school graduates. For instance, in Ghana about 90% of the secondary schools (even some primary schools) are residential. That is, students reside on campus for their studies and have short holidays during the year. In the boarding houses, laborers clear the weeds on the campus, collect and wash students' plates after they have eaten, and work as security men (watchmen) who take care of students' belongings and watch for their safety while they sleep. In this milieu, students develop the attitude that achievement in academic courses will ensure enjoyment of such privileges after school, but that failure would relegate them to the position of laborer. This perceived reward structure hinders their acceptance of practical courses in the secondary curriculum.

The attitudes of teachers also help to shape student job aspirations. Teachers frequently use manual work as a form of punishment, while they lavish praise on those who do well in their academic courses. In some cases, the vocational teachers are not respected or given recognition, since the academic teachers (and even the educational authorities) believe the former do not possess inadequate formal qualifications, coupled with a poor academic background. This is further exacerbated by a general stress on certain academic courses such as science, which, in view of their content, have hardly any practical use in the daily life of these students.

It is true that the existence of a dual economic structure with its attendant reward differentials, contributes substantially to the unemployment problem among the educated. But it could also be argued that high inflation, resulting in high rates of house rent, transportation costs to and from work, and the high cost of food in the urban centers, is rapidly threatening the 'comfortable' city life. In the LDCs, including Ghana, most civil servants today can barely make ends meet on the salaries they receive. For example, in 1990, while the average civil servant in Ghana earned a monthly salary of ¢6000 per month, it cost between ¢4000-¢8000 to rent a room in the towns. A bag of rice cost ¢28,000, milk ¢150, while the weekly transportation cost (to and from work) averaged between ¢2000-¢4000 (West Africa, Dec. 1990).

Professor Assimeng, head of the sociology department, University of Ghana (Legon) argued that the harsh economic situation was rapidly eroding the "value" of formal education. He alleged that, while the secondary school graduate earned about ¢8000 a month, an illiterate, semi-illiterate or an educated person who chose to trade or sold tomatoes on the market, made a monthly profit of ¢28,000-¢30,000 (West Africa, Dec. 1990). In other words, it appeared that those who possessed some form of vocational training, including trading, were becoming better off economically than those with academic qualifications or "office" jobs. This situation has resulted in most urban workers quitting their jobs in favor of either farm work in the rural area or investment in farming to reduce their food expenditure. Foster (1966) based his critique of Balogh's proposal on his research in Ghana. But the Ghana of 1965, which he studied, was quite different from the Ghana of the 1990s in terms of its economic, political and social conditions. In other words, some of the arguments advanced against vocational education in the 1960s and 1970s need reappraisal, for the conditions upon which such a criticism was derived have undergone rapid changes and continue to do so.

It appears that both critics and researchers overlook the fact that students possess both idealistic and realistic aspirations. That is, while still in school, students usually hold idealistic views about the labor market. They tend to believe that several jobs of their choice await them after school because they possess the required qualifications. Upon completion of school they come to realize that their occupational hopes were just dreams. In this context, they are always willing to be more "realistic" and assume "any" type of job as long as "some" financial gains accrue.

Finally, Bacchus (1986) suggests that vocational education be made an integral part of the overall development plans of the LDCs. This would somehow seem to resolve the debate in favor of vocational education. But the problem of how to make it an integral part of the overall development plans of the LDCs still remains open--just as Balogh neglected to explain how to integrate the academic and practical courses.

Philosophical Justifications

The three philosophies of education discussed previously attempted to relate education not only to social norms, values and beliefs but also to occupational needs of society through the introduction of vocational education in schools. In short, they resulted in an endeavor to achieve the "balanced" curriculum for the schools. However, the philosophical ideal of relating education to social needs and practices conceals certain pertinent issues. First, the proposition disregards the nature and ability of the various economies, particularly those of the developing nations, to absorb and productively utilize the various academic and vocational skills produced by the schools. Since colonial times, economies of the developing nations have been characterized by inelastic labor markets, due to their limited industrial base and undeveloped large agricultural sectors. This type of economy can only absorb about 20% of the labor force in its modern sector, to which all school graduates look for employment. Hence, the problem of the optimal utilization of the skills developed continues to remain. Most of the skilled individuals required to contribute to social transformation and educational development, therefore, tend to be left out in the process and become part of the growing body of the educated unemployed in these countries. This, therefore, greatly undermines the ability of the schools to provide an education that is considered relevant to the economic needs of the society.

Second, it appears that the efforts to introduce vocational education programs have ignored the socio-economic aspirations of the clientele of the schools. Formal education is valued for its economic return in the developing nations; hence, no matter how philosophically sound it appears to be, vocational education in the school curriculum remains unattractive to students in these countries.

Third, although the reasoning is clear regarding the benefits of relating education to the economic needs of society, all these philosophies of education fail to outline the specific courses that should together form the vocational education program. The problem here is how to select the "relevant" courses which are likely to prepare the student for community lifestyle and local occupations. Therefore, what students should study as part of the vocational programs also remains an unresolved issue.

In addition, the problem of where to offer the practical courses is overlooked. That is, should agricultural skills, for instance, be taught in the schools or outside the school? Which venue will produce the best results? Perhaps the most disturbing issue is how to integrate both the academic and vocational courses in the curriculum. In other words, in what ways should the two programs be brought together to achieve a balance in the allocation of time for the various courses, and to establish an order of priority for these subjects in the school curriculum? These issues have continued to plague vocational education programs in the developing nations since colonial times.

Finally, government support for the practical implementation of vocational education programs is often inadequate. Policymakers and educators give a great deal of verbal support to such programs while, in reality, they shirk their responsibility for supplying the necessary material required for successful implementation, i.e., funds, materials, equipment and qualified teachers. The implementation of the general education proposed by the three philosophies above, therefore, can only be achieved when these issues are resolved.

Human Capital Theory

The human capital theory focused on the development of urban employment skills, thus contributing to the neglect of rural development in the LDCs. As a result of this focus, urban migration has increased and so have unemployment rates in Africa, Asia and Latin America (see Table 5). For example, unemployment in these developing nations grew from 36.5 million in 1960 to over 54 million in 1973, an increase of about 49%. In Africa alone, unemployment grew from about 8.5 million to almost 14 million during the same period.

More recent studies have exposed some of the flaws of the theory (Arrow, 1972; Jencks et al., 1972; Collings, 1979; Dore, 1976; Blaug, 1973). For example, it was discovered that economic growth depended on many factors including market, capital and industrial expansion, besides the stock of human capital. In addition, it was found difficult to establish what levels of human capital or cognitive skills constituted the minimum necessary for the effective performance of particular jobs. However, the human capital theorists succeeded in justifying large expenditures on education for economic growth promising of a "better" life in the LDCs, through vocationalization of education.

Research Reports

The research reports certainly produced evidence which is not supportive of vocational education programs in primary or secondary schools. On the other hand, it could be contended that the findings apply only to the unique situations and conditions prevailing in the countries involved at the time the studies were conducted, even though there may be some similarities common to all LDCs. In Kenya, Lauglo reported that IE enjoyed high status among teachers, parents, academic and vocational students. The main reason for this high status appeared to be the use of more advanced equipment in the IE courses compared to the local or traditional tools being used in other vocational programs in the LDCs, such as the JSS program in Ghana. There is no doubt that the use of local implements such as hoes and cutlasses in the farming program, for instance, reduces IE students' status, especially in the urban schools. According to Lauglo, the IE teachers interviewed were even against any simplification of the equipment used in IE courses for fear of reducing the program's status.

The World Bank's current support for primary education's expansion rather than vocational education appears logical, due to the research evidence so far produced. However, expanding the number of primary schools does not guarantee quality in all the schools. In the LDCs, including Ghana, several primary school graduates are not even able to write their own names, much less read a book with understanding. This is due to the unequal distribution of resources and qualified personnel across the system.

Abandoning vocational education in favor of primary school expansion does not solve, in particular, the unemployment problem. In fact, it could even worsen the situation since the primary school graduates might not be productively employed. However, the evidence is in favor of primary education since research indicates that it yields a higher rate of return on investment than any other level of education.

Finally, as suggested by the various research reports, further studies should be conducted in the same countries and in other developing countries before final conclusions can be drawn regarding the socio-economic returns of vocational education.

Table 5
Employment and Unemployment in Development Countries
1960 - 1980 (in thousands)

Indicator	1960	1970	1973	1980	1990
All Developing Countries*					
Employment+	507,416	617,244	568,000	773,110	991,600
Unemployment	36,466	48,798	54,130	65,620	88,693
Unemployment Rate (%)	6.7	7.4	7.6	7.8	8.2
Combined Unemployment and Underemployment					
Rate (%) **	25	27	29		
Africa	31	39	38		
Asia	24	26	25		
Latin America	18	20	25		
All Africa					
Employment+	100,412	119,633	127,490	149,390	191,180
Unemployment	8,416	12,831	13,890	15,973	21,105
Unemployment Rate (%)	7.7	9.6	9.8	9.8	9.9
All Asia*					
Employment+	340,211	413,991	441,330	516,800	660,300
Unemployment	3,258	31,440	34,420	43,029	59,485
Unemployment Rate (%)	6.8	7.1	7.2	7.7	8.3
All Latin America					
Employment+	66,793	83,620	89,180	106,920	140,120
Unemployment	3,258	4,527	5,820	6,618	8,103
Unemployment Rate (%)	4.7	5.1	6.1	5.8	5.5

* Excluding China

+ Including Underdevelopment

** Not calculated for 1980 and 1990

Source: Todaro, M.P. (1977), Economic Development in the Third World.

These countries have gone through substantial changes which might well have increased the economic output of vocational education. Conversely, there is continuing faith in the vocationalization of education as a potential means of solving the unemployment problem among the educated in the LDCs. This can be seen in the current introduction of Ghana's JSS program and those of Zimbabwe and other LDCs. Perhaps this is due to the fact that these societies have no other alternatives from which to choose. The current World Bank support for the JSS program in Ghana is clear testimony that not all aid agencies and development banks have abandoned the vocational idea, despite the evidence amassed casting doubt on its economic "usefulness".

Concluding Remarks

As in the colonial period, vocationalization in post-colonial Ghana (as in other LDCs) has equally failed to take cognizance of the prevailing social, economic and political realities of the country. That is, the socio-economic and political structures which appear to influence the kind of education that could be "relevant" for these societies are being ignored. Government, politicians, policymakers and educators continue to live in ivory towers where they prefer to blindly believe that theoretical and philosophical reasoning, backed by empty rhetoric, can somehow solve the socio-economic problems facing their respective countries. However, the discussions, surveys of literature, and observations presented in this chapter indicate that this assumption is wrong.

Although there may be some correlation between education and national development, the many intervening variables which affect this relationship need to be addressed before any goals of vocationalization can be realized. In this respect, issues pertaining to the dual economic structures, income differentials, student and parental aspirations and central government support and commitment need to be examined in depth.

The following chapter presents the research design employed in assessing the most recent vocationalization effort in Ghana--the Junior Secondary School Program.

CHAPTER V

RESEARCH DESIGN

As stated earlier, the major purpose of this study is to review and analyze efforts made in Ghana to vocationalize the school curriculum, including an assessment of the most recent version of curricula reform along these lines. This reform involved a plan to implement nationwide the Junior Secondary School Program (JSSP). The objective of the study is to determine how effective the JSSP has been in achieving the range of socio-economic goals set for it by the Ghanaian government, policymakers and education authorities, especially in view of the past history of diverse implementation problems that have been associated with vocational education in developing countries.

This chapter describes the research design for the empirical part of the study. It also gives an account of the problems encountered by the researcher in the data collection process due to the restrictive measures imposed by the current military government in making available any information about the process of introducing the Junior Secondary School Program in Ghana.

AREA OF STUDY

The study was conducted at the Ministry of Education, Ghana Education Service, the National Teacher Training Council Headquarters, the Ministry of Labor and Social Welfare and the Ministry of Local Government offices in Accra, Ghana. In addition, the Regional Education offices in Accra, and Kumasi were also included along with the District Education centers of Achimota, Mataheko, Labadi, Amasaman, Konongo, Juaso, and Agogo. Six Junior Secondary Schools were selected within Accra and the Ashanti regions for the school level field study. Two training college principals were also interviewed.

Population and Sample

The sample for the study was chosen from the following defined population (those directly involved in the implementation of the JSS program): The Secretary and Deputy Secretary for Education, Director-General, Ghana Education Service, Ministry Education officials, department heads of the Ministry of Education, Directors, Assistant Directors and Regional Directors, Ghana Education Service, Curriculum officials, National Teacher Training Council officials, training college principals and Junior Secondary School headmasters and teachers, along with officials of the Ministry of Labor and Social Welfare.

Methodology

Data collection for the study employed three methods: documentation, interviews and analysis of secondary data.

Documentation

Both primary and secondary sources were examined to gather descriptive data on the rationale and goals of the JSS program along with the implementation, curriculum design, equipment and resources supplies, teacher development and supply, enrollment and examinations policies, and financing. With regard to financing, the intention was to collect data on educational budgets and expenditures, the estimated cost of the program, the amount legislated for its implementation and, the specific contributions made by the various aid agencies involved. At the Ministry of Labor and Social Welfare. The intention was to collect unemployment data.

Primary data included facts and figures on numbers of teachers, students, schools, the educational budgets, the equipment and distribution system. Such data, particularly those dealing with the JSS program, were supposed to have been compiled by the Ministry of Education and the Ghana Education Service.

Secondary data sources included journals, books, graduate theses and library resources from the Department of Educational Foundations, University of Alberta, Institute of Education, University of London, England, Senate House, England, University of Cape Coast, Ghana, and the University of Alberta. The local Ghanaian newspapers, West Africa Magazine, and Ministry of Education publications also provided useful data for the study.

Qualitative research methods were also employed in collecting data for the study; these were supplemented by interviews.

QUALITATIVE RESEARCH METHOD

Described by Maanen (1983), qualitative research method is:

> an umbrella term covering an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring

phenomenon in the social world (p. 9).

Although qualitative and quantitative studies are not mutually exclusive, they are different at least in form, focus and emphasis of study (see Table 6). Advocates of qualitative research argue that, since human behavior is significantly influenced by the setting in which it occurs (Bogdan & Biklen, 1982), it is essential for the researcher to penetrate the social world of those who are being researched in order to understand the meaning which these subjects give to various phenomena and their perceptions of their operative situation as well as their ability to transform that situation. However, this is not to suggest that qualitative research is an alternative, or even opposite to' quantitative research. Rather. there is a complementarity between the two approaches (Bogdan & Biklen, 1982), as pointed out by Firestone (1987):

> Quantitative and qualitative studies are not antithetical. They present the researcher with different kinds of information and can be used to triangulate to gain greater confidence in one's conclusion.

The qualitative approach was adopted for this study because:

(1) A detailed analysis of the socio-economic structure, rationale and goals, and the general implementation of the JSS program, was needed to serve as feedback for future modification for the educational authorities. It was hoped that both the process and the results of the research project

would benefit the government and educational authorities of Ghana, as well as other LDCs engaged in vocationalization of their education system, as opposed to being a mere academic exercise or simply an obscure policy analysis.

(2) There was a need to present an accurate, descriptive, and analytical account of the socio-economic, political and educational structures upon which the curriculum reforms were based. This was to help in drawing appropriate conclusions for the study.

(3) It was the most appropriate method for the study since it helped the researcher to gain detailed information about the program both from the educational authorities as well as the administrators, teachers, students, and parents.

Interview Techniques

A semi-structured interview guide, using the standard open-ended approach, was employed to validate or supplement available data. In this technique some of the information required was obtained by asking a series of structured questions. The interviewer then probed more deeply, using open-ended questions to obtain more complete data, greater clarity and depth of the issue under investigation (Borg, 1963). The main disadvantages involved in the use of this approach, and of which the researcher was warned, were subjectivity and bias. The approach was also time-consuming.

For this study, respondents selected for the interviews were

Table 6

Differences Between Quantitative and Qualitative Research

QUANTITATIVE	QUALITATIVE
Assumptions About the World	
That there exists social facts with an objective reality apart from the belief of individuals	Reality is socially constructed through individual or collective definitions of the situation
Purpose	
To explain the causes of changes in social facts mainly through measurement and quantitative analysis	To understand the social phenomenon from the actors' perspectives through participation in the life of those actors
Approach	
Experimental or correlational designs to reduce error, bias, and other "noise" which hinders one to clearly perceive social facts	Ethnography that helps the researcher understand the definitions of the situation of those studied
Research Role	
Researcher is detached to avoid bias	Researcher is "immersed" in the phenomenon of interest

Source: Adapted from Firestone, W.A. (1987). Meaning in method: The rhetoric of quantitative and qualitative research. Educational Research, 16(7, October).

chosen on the basis of their knowledge, position and participation in the implementation of the Junior Secondary program. In this regard the Deputy Secretary for School Education, the Director General of the Ghana Education Service, the Director of the Curriculum Research and Development Division, the National Teacher Training Council Chairman, and the Deputy Secretary for Local Government were interviewed. In addition, selected District Assistant Directors of the Ghana Education Service, District JSS Coordinators, JSS headmasters, and teachers were also interviewed. However, it is important to mention here that, since these interviews were only used to solicit information and supplement available data, the findings from the interviews were incorporated into the analytical chapter and were not analyzed separately since they generally confirmed the documented data and were not meant to play a major role in this study.

Procedure for Obtaining Data

The Deputy Secretary for School Education of Ghana's Ministry of Education and the Director-General of the Ghana Education Service were contacted through formal letters requesting permission to conduct the study and to allow the participation of the other JSSP officials in the study through interviews. Included in the letters was a brief description of the nature and purpose of the study as well as a request for permission to collect data about the program from the Ministry's headquarters in Accra, the regional and district centers, and selected Junior Secondary

Schools.

DATA COLLECTION PROBLEMS

Although the Ministry of Education granted the researcher permission (see appendix H) to conduct the research in Ghana, and allowed its JSSP officials to participate in the interviews, actual data collection was made difficult by the current political climate of the country and government decrees regarding the general implementation of the program.

The Political Climate

On December 31, 1982, for the fourth time within a period of nearly fifteen years, a military uprising toppled the elected civilian government from office.

Upon gaining control, the new regime, the Provisional National Defence Council (PNDC), initiated and enforced military rule within the country. Since that time access to information regarding government policies and programs has been quite restricted. In the case of the JSS program, the researcher found this to be particularly true. As a result, access to official documents regarding the program was quite limited. Hence, the researcher had to rely on information gleaned from interviews and conversations and from secondary data that are publicly accessible (e.g. library material, journals, magazines, etc.).

However, despite these restrictions, the researcher was able to reach a fair sample of the individuals involved who were directly responsible for the national, regional, district, and school level implementation of the Junior Secondary School Program.

Data Source

The Basic Education Sections of both the Ministry of Education and the Ghana Education Service served as important and helpful data sources, as these two departments were directly responsible for the entire implementation of the program. The Ministry of Education provided documents which included policy statements concerning the rationale and official goals of the JSS program, its history, the implementation strategy, and financing policies.

The Ghana Education Service furnished documents on the number of Junior Secondary Schools, their enrollments, and the number of JSS teachers.

The Curriculum Research and Development Division (CRDD), a department of the Ministry of Education, was responsible for translating the goals of the program into courses of study, developing timetables and designing examination requirements for the Junior Secondary Schools. They supplied the timetables being used and information on the JSS curriculum, equipment and resources used in the program and their distribution system, examination policies, and problems they have encountered with the implementation of the curriculum.

The National Teacher Training Council (NTTC) was also helpful. The NTTC was the sole and legitimate trainer and supplier of qualified teachers for the Junior Secondary Schools, the actual classroom implementors of the program. It provided documents on the total number and types of teacher training colleges in the country, the new curriculum being used, the number of teacher trainers, along with enrollment figures.

The Ministry of Local Government was helpful in explaining the central government's recent decentralization policy and its effects on the JSS implementation, particularly at the district level.

The District Assistant Directors and their coordinators contacted furnished information on the implementation of the JSS program at both the district and school levels and the actual problems involved. Their information was particularly useful since it gave a more realistic picture of what was happening in the implementation process as opposed to the consistent "success" stories given by the JSS officials in Accra.

Teacher college principals interviewed provided the background of current teacher training methods, the new curriculum and related problems facing the colleges in their efforts to provide teachers for the Junior Secondary Schools. Their candid statements challenged most of the National Teacher Training Council's "problem-free" accounts of the teacher development exercise.

Selected JSS headmasters and their staff discussed the actual classroom implementation procedures and the various problems facing schools in this direction, particularly those involving communication with district and national JSS officials. In addition, the teachers provided their assessment regarding the rationale and goals, the implementation process, and the possible future of the program.

Interviewing the teachers at the Junior Secondary Schools provided the researcher with the opportunity to also conduct classroom observational study to confirm or challenge the information received from the various sources.

DATA ANALYSIS PLAN

According to Bogdan and Biklen (1982), data analysis involves "working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others" (p. 145).

It was not possible before the process of data collection to prepare a standardized format for analyzing the responses for the questions to be asked, because most of the responses could not be predicted. In addition, several questions arose during the research process itself. The data analysis in this study commenced with the initial collection of data and continued after the collection was completed. The steps of collecting documents, interviewing, and analyzing the data were done almost concurrently.

Bogdan and Biklen (1982), advise that the beginning researcher should borrow strategies from the analysis-in-the-field mode and leave the more formal analysis until most of the data are in. In secondary analysis of documented data, which is supplemented by interviews, it is important that data collection and analysis be an on-going process, since the information obtained guides the focus of the study. It also helps to direct future interviews and additional data collection (Glaser & Strauss, 1976).

Frequencies as well as percentages and content analysis were used to analyze the data gathered.

Content analysis, according to Borg (1963), is "a research technique for the objective, systematic, and quantitative description of the manifest content of communication" (p. 256). In other words, such analysis indicates any logical technique for making inferences by systematic and objective analysis identifying special characteristics of messages. Figures and responses were therefore analyzed according to the effect that they had on the issue under investigation.

TRIANGULATION

Triangulation of data sources was a key research method used in analyzing the data. Denzin (1978) defines triangulation as the "combination of methodologies in the study of the same phenomena". He contends that:

> multiple methods should be used in every investigation, since no method can ever completely reveal all the relevant features of

> empirical reality necessary for testing or developing a theory (p. 28).

Triangulation, however, is not limited to the use of data. According to Denzin (1978), it can involve a variety of observers or investigators, theorists or perspectives, and methodologies all in pursuit of addressing the same theoretical question. In general, it is assumed that multiple methods increase the accuracy of the research findings (Jick, 1979). In support of the use of triangulation, Jick (1979) suggests that this research strategy:

> can be something other than scaling, reliability, and convergent validation. It can also capture a more complete, holistic and contextual portrayal of the unit(s) under study. That is, beyond the analysis of overlapping variance, the use of multiple measures may also uncover some unique variance which otherwise may have been neglected by simple methods. It is here that qualitative methods, in particular, can play an especially prominent role by eliciting data and suggesting conclusions to which other methods would be blind. Elements of the context are illuminated. In this sense, triangulation may be used not only to examine the same phenomenon from multiple perspectives, but also enrich our understanding by allowing for new deeper dimensions to emerge.

Furthermore, he identifies the use of triangulation on the basis of the opportunities it provides to the researcher:

(1) achieve higher levels of confidence in the results;

(2) stimulate the creation of inventive methods of data collection and analysis;

(3) uncover the deviant dimension of a phenomenon;

(4) enrich explanation of the research results, and

(5) serve as a critical test for competing theories.

On the other hand, he also identifies three main limitations of this method of which the researcher should be aware:

(6) reapplication is difficult;

(7) the strategy may not be suitable to all research purposes, and

(8) funding and time constraints may prevent its effectiveness.

In this study triangulation of the various data sources was employed in order to ensure that the different perspectives were represented as accurately as possible and for the researcher to obtain a good understanding of the issues under study.

DELIMITATIONS

Although the JSS program was introduced as a pilot project in 1976, the assessment presented in the next chapter focuses on its nationwide implementation since 1987. This date was chosen because:

(a) September 1987 differentiated the program from its 1976-1986 experimental period in about 118 schools.

(b) The nationwide implementation of the program since September, 1987 served as a milestone in the history of Ghana's basic education course, because it marked the first departure from the inherited colonial academic education course to a country-wide adoption of a vocational education program.

Since the implementation of the JSS program has been both theoretically and practically uniform in all the ten regions of the country, limiting the study to Accra (where all the head offices of the various educational ministries are located) and the Ashanti Region (particularly Konongo District) did not affect the intent of the study.

LIMITATIONS

A study of this nature requires a considerable amount of time to enable the investigator to obtain a deeper insight into the problem(s) under investigation. Also, because the research was conducted mainly in government departments, bureaucracy and red-tape tended to impede the process. In addition, financial and time constraints forced the researcher to abandon plans for lengthy travel to remote rural Junior Secondary Schools where some other evidence regarding the implementation of the program might have been available.

CHAPTER VI

THE JSS PROGRAM (1976-1986) AND EVALUATION OF ITS GOALS SINCE 1987

Introduction

As previously indicated, efforts at vocationalizing the curriculum of schools in Ghana and other LDCs have been unsuccessful since colonial times, despite the often sound rationale advanced supporting its introduction. This failure has been due to a number of factors including wrong assumptions made by policymakers and poor implementation strategies, added to a lack of full government support for such programs. These earlier failed efforts did not discourage the Government from continuing its efforts to introduce more "practical" subjects into the curriculum. Therefore, in 1974, it launched the JSS Project as another effort to achieve this goal.

The Junior Secondary School Program: First Implementation Attempt (1976-1986)

Subsequent to approval of the JSS program and the establishment of the new Ghana Education Service (GES) in 1974 to implement it, nine middle schools were converted into Experimental Junior Secondary Schools in 1976, with one in each of the then nine administrative regions. The GES appointed headmasters were given two weeks training to enable them to supervise these schools. The JSS teachers were selected from the existing group of trained post-secondary teachers. In the same year, a 3-year, post-secondary teacher training program was established to train teachers for the Junior Secondary Schools. Most of them were located in the regional and district centers.

The Curriculum

The experimental JSS curriculum, designed by the Curriculum Research and Development Division (CRDD), consisted of core, vocational, technical, commercial and general courses.

Core Courses - English, science, math and social studies
Vocational - catering, dressmaking, fishing, agriculture, vulcanizing and carpentry
Technical - woodwork, metalwork, masonry and electrical studies
Commercial - commerce, accounting, office practice and typing
General - Ghanaian languages, French, religious studies, music and drama, and cultural studies (Ministry of Education, 1974).

All students were to take the core courses. In addition, each was to choose a set of technical, vocational, or commercial courses and two optional subjects from among the general courses.

The implementation strategy followed that of the former Continuation School Program. The regional coordinators gathered reports from the schools in their region and sent them directly to the GES headquarters in Accra, where such reports were expected to receive attention.

The Provisional National Defence Council (1981) and the End of the Experimental JSS Project

In 1981, a new military regime--the Provisional National Defence Council (PNDC)--assumed power and halted the expansion of the Experimental JSS project. The new regime, in collaboration with the International Development and Research Center (IDRC) of

Canada, recruited Dr. Russell of Queen's College (Canada) in 1985 to conduct a two-year evaluation study of the project. The objective of the investigation was to ascertain the "relevance" of the JSS program as a productive educational alternative for the country.

However, this evaluation was still underway when, in 1986, the PNDC not only lifted the expansion ban but also ordered a nationwide implementation of the program. Consequently, without having established a new format based on Dr. Russell's investigation or any other researched strategy, over 4,000 middle schools were converted into junior secondary schools in 1987, in an attempt to vocationalize the entire basic education program in Ghana.

THE JSS PROGRAM: 1987 - PRESENT

Rationales and Goals

Even though the vocationalization of the curriculum was a key element in the JSS program, there were other important developmental goals which were included in the program. In a bid to attain greater national development, i.e., economic growth and an improved quality of life for the people, Ghana's policymakers and educational authorities adopted the JSS program in the belief it would help make the education system more relevant to the needs of the economy.

The Ministry of Education identified a number of diverse goals which it expected to achieve through the program. Those enumerated in its official policy document[1] could be grouped into the following categories:

(1) Improving the basic standard of education offered to all students attending school in Ghana. This was to be achieved partly by the "introduction of secondary school courses at the basic education level" (MOE, 1987). It was also expected that the "quality of the basic education" would be improved by the vocational nature of the program.

(2) Increasing the educational opportunities available to all students of school age in the country. It was expected that this objective would be achieved by (a) increasing the "access to education" through the provision of more educational services throughout the country (MOE, 1987); and by (b) providing the type of educational opportunities that "would predispose pupils to acquire knowledge and skills" which would "enable them to discover their "aptitudes and potentials" and to develop in them "a longing for self improvement" (MOE, 1987). It was hoped that the type of education devised would be so useful that students throughout the country would be motivated to remain in school and make full use of the basic educational opportunities provided.

(3) Improving the content of the educational program to be offered. This was to equip the students with the type of "attitudes and values, knowledge and skills" to qualify them either (a) to continue their education in the senior

secondary schools; or (b) to "adjust to the new environment in which they would find themselves after leaving the Junior Secondary School", if they were not selected for education beyond this level (MOE, 1987).

(4) Reduce the overall cost of education by (a) developing a program that was "cost-effective"; and (b) reducing the duration of pre-university education from 17 years (i.e. 6 years primary, 4 years middle school, 5 years secondary 'O' Level and 2 years Sixth Form 'A' Level), to 12 years.

(5) Finally, the program was to be geared toward the sharing of financial and other responsibility for this level of education between the central government and local communities. This was to be achieved by "involving" the communities in the implementation of the JSS program (MOE, 1987).

GOAL NUMBER ONE

Background

With regard to goal number one, improving the basic standard of education offered to all students attending schools in Ghana, the Ministry of Education publication[2], stated that adult illiteracy in Ghana (as in other developing nations), was a significant problem. According to UNESCO estimates, the average rate of adult illiteracy in 1985 was 46.8% (UNESCO, 1989). The government and the Ministry of Education therefore suggested that the current educational reforms should aim at "increasing literacy both "free" and "compulsory" primary and basic secondary education courses, as embodied in the new basic education system (6 years primary and 3 years junior secondary school education (MOE, 1987).

The curriculum previously offered at the primary level had, they contended, not met this challenge. This latter claim was reinforced later by a senior Ministry of Education official[3] during an interview with the researcher. Most elementary school graduates produced by the former system, he stated, were "unable to write their own names" after the ten-year primary and middle school program. In addition, the introduction of secondary level courses (e.g. science, social studies, economics, etc.) into the new basic education program at the Junior Secondary School level would, they believed, better equip students with "high quality" education to make them "more literate" by the end of the program.

Observations

While this objective of trying to improve the standard of basic education was laudable, the Ministry of Education officials, in their eagerness to obtain quick results, failed to define their meaning of quality. The issue of quality in education has always been elusive to educators. What kind of quality is being sought? What is its scope? Can it be measured? Upon what criteria is it based and on whose definition? Clarification of what was implied by "good quality" was even more important since it was hoped that this basic level of education would eventually contribute to an improvement in the quality of the life of the population. Given this assumption, it was all the more necessary to indicate clearly what type of curriculum was most likely to achieve such a goal.

As pointed out by Hawes (1979), the ability to set and achieve goals is only one aspect of quality in education, and there will always be differing views on what constitutes "quality". The politician, the economist, the parent, the educator, the community and the student each possesses a different interpretation of the term.

In the case of the JSS program, quality was being perceived differently by the rural and urban communities, by curriculum designers, by Ministry of Education officials, by the government, by students, teachers, and the foreign aid agencies involved. To program teachers and to administrators "quality" education necessitated the provision of an adequate supply of equipment and resources, furnished classrooms, increased salary scale, and other practical necessities. Conversely, to the politicians and the Ministry of Education officials, quality often meant the production of skilled school-graduates capable of entering the workforce to reduce the growing numbers of the educated unemployed. But this definition of quality tended to concentrate more on the "excellence" or "nature" of the outcome rather than means of achieving them (Hawes, 1979). After all, increased literacy and numeracy rates also greatly depend upon such tangibles as adequate resources and materials, qualified teachers, funds, and physical facilities. These were in short supply in the

Ghanaian schools; hence, the introduction of secondary level courses as part of the "basic education" curriculum did not in itself improve quality. A narrow view of quality often appeared to have hindered the realization of this goal in the Junior Secondary Schools.

GOAL NUMBER TWO

Background

In connection with the second goal of the JSS, which focused on increasing the educational opportunities available to all students of school age in the country, the MOE publication[2] stated the two main objectives targeted for its achievement. These were: 1) to establish "social justice" by giving equal access to basic secondary education to all children, irrespective of their sex and socio-economic background; and (2) to provide students with knowledge and skills to enable them to develop both their aptitudes and potentials, and a longing for self-improvement.

Commenting on the first objective, a senior Ministry of Education official[3] explained that, since colonial times, secondary education has been available only to children (particularly male children) whose parents were able to afford the exorbitant school fees. For example, in 1986 the fee was ¢60,000 per student for the academic year. These imbalances in enrollment between primary, secondary and tertiary level education are clearly indicated in Table 7. At the conclusion of their free primary school career, the number of children continuing their education dropped drastically. This was particularly the case for the females, since traditional attitude expects females to be homemakers. Thus, most parents would not spend their meager earnings on school fees for them.

From the enrollment patterns between male and female presented in Table 7, it could be concluded that less of the female school age population gained access to basic and secondary education, and fewer still to university education. Again, it appeared that adult illiteracy was higher among females than males, indicating that equal access to education was therefore not being provided. According to the MOE official[3], the introduction of the JSS program was therefore intended not only to "produce good quality graduates" but also to correct this socio-economic and gender imbalance in the distribution of secondary education which has been the privilege of male children of a few rich families.

In relation to the second objective of goal 2--providing students with knowledge and skills to enable them to develop their aptitudes and potentials and a longing for self-improvement--the MOE argued that the drop-out rate was very high in the former system because the curriculum did not make allowance for individual differences in abilities (academic or vocational). Therefore, those unable to cope with the academic courses had no interest in completing the program. This was evidenced by the drop in enrollment from 100% in primary one (P1) to 81-82% by primary

Table 7
School Enrolment (%) by Sex and Level

Year	Sex	Primary	Secondary	University
1965	MF	69	13	1.0
	M	82	19	--*
	F	57	7	--*
1985	MF	63	35	2.0
	M	63	35	--*
	F	59	27	--*
1987	MF	71	40	1.5
	M	78	54	2.4
	F	63	32	0.6

* Figures not available.

Source: UNESCO (1989), UNESCO Statistical Yearbook. (See also World Bank (1984), Ghana policies and program for adjustment.)

in enrollment from 100% in primary one (P1) to 81-82% by primary three, with only 60-62% completing the basic education course (MOE, 1990; Europa Yearbook, 1990). According to one senior MOE official[4], Ghana had lost the potential contribution of many talented students because of the failure of the school curriculum to develop such talents and to "stimulate" the children's interest in education as a means of self-improvement (MOE, 1974). Consequently, it was hoped the diversified nature of the JSS curriculum would offer students the opportunity to excel in more fields of study--be it vocational or academic--thus sustaining their interest in attending school and in completing the basic education course. This done, the knowledge and skills acquired would help the graduates improve their standard of living and that of the country in general.

Observations

These policies of increasing access to educational opportunities and developing individual potential embodied the functionalist view of the role of the school in society. As discussed in chapter three of the study, this view of schooling suggests that schools represent an efficient and rational way of sorting and selecting talented people so that the most able and motivated attain the highest status positions (Hurn, 1985). Those unable to achieve such positions were to be channelled into vocational education courses which would produce middle-level manpower personnel (Hurn, 1985). In a nutshell, the theory posits a meritocratic view of society based upon equal educational opportunity to all, irrespective of sex or socio-economic background, where each individual is rewarded according to merit rather than ascription. Thus, the education authorities hoped to employ the JSS diversified curriculum as a screening devise in selecting people for various vocations based upon ability rather than socio-economic background or sex, thereby providing more equal opportunities for upward mobility in the society. However, two problems appeared evident: (1) lack of social credibility for vocational education; and (2) the desire for increased access to education outstripping the available school places and facilities.

First, disparaging public opinion of vocational occupations and attendant low incomes of vocational education graduates demanded that access to academic education remain high, people still believing it would lead to better-paid jobs. The Ghanaian economy, however, was only capable of absorbing about 20% of the 4.5 million eligible workforce (Europa Yearbook, 1990). The remaining 80% continued to be destitute in the large rural sector of the economy, the area with the greatest potential for development. But until the government put effort into developing this sector, the present attitudes toward vocational education and occupations would remain the same, and the program would be unsuccessful.

In this vein, if the objective of social justice is to be achieved, the question must be answered as to what types of basic skills should be developed and to what extent, and what kind of farming techniques the school should teach to help the rural students increase their earnings and social status. As mentioned in chapter three, critics like Foster (1966) argued that the advocates of vocational education, including Balogh (1962), failed to clearly specify the content of the vocational courses to be studied in the schools. Similarly, this issue pertaining to the content of the agricultural education in schools was not clarified by the colonial advocates.

The second objective of the second goal was to use the JSS program to increase access to basic education. This would have widened available educational opportunities. But this was confronted with two contradictions: (1) the payment of fees; and (2) the notion of equality of opportunity. Basic education in Ghana was not only supposed to be "free and compulsory", but also the "right" of every Ghanaian child, a confirmation of the country's commitment to implementing the UN declaration which made formal education the "right" of every child in every country. Nevertheless, parents had come to realize this pledge to be fallacious since the new system had limited their children's access to basic education due to the fees assessed from primary through the JSS level. This situation has worsened over the years, since school fees had been increased with the inception of the program in 1987, while the economic position of many parents continued to deteriorate. Originally, the fee was set at ¢120 per year, but as of May, 1990, it was doubled to ¢250 per year. To most parents in Ghana, particularly those in the rural areas whose incomes were quite irregular and meager, this amount was quite substantial, especially considering that most families had several children in school. The inability of these parents to pay school fees often resulted in their children's withdrawal from school. Under the former system parents were not required to pay fees at the basic education level. This new system, however, was "free". Nor did it help to *increase* access to schools. Even if the policy of increased access had been achieved, the attainment of equality of opportunity would not be assured. Increased access did not guarantee that students would continue their education to complete the basic education program. It also did not guarantee the provision of sufficient qualified teachers, adequate resources and equipment, and equal funding for all the schools throughout the country.

In addition, increased access needed to be measured by rapid population growth against available school places. The annual population growth in Ghana had increased from 2.2% during the period 1965-1980, to 3.5% in 1980-1986. It is expected to increase another 3.1% by the year 2000 (UNESCO, 1989). Currently, Ghana has a population of 14 million, with a total of 10,181 primary schools, enrolling about 1.5 million pupils (MOE, 1990). Yet about 43% of the school age children are not in school because of the limited number of school places available. Thus, the policy of using the JSS program to increase access to basic education and to widen available educational opportunities for all children in the country is highly questionable at this time.

GOAL NUMBER THREE

Background

The third goal of improving the content of the educational program was to be achieved by equipping the students with the "attitudes, values, and knowledge and skills" necessary for further studies, or for adjusting to life in their various communities after junior secondary school. The recommendations of the Dzobo Committee, contained in the Ministry's education document[5] provided a rationale for this program objective. The Committee considered the development of the country's human resources "a vital pre-requisite for its socio-economic development" (MOE, 1974). It recognized that, due to the changes taking place in the world and in the Ghanaian economy in particular, education should "aim at instilling in the individual an appreciation of the need for change directed toward the development of knowledge and skills", particularly in the areas of science and technology, to transform his environment and so improve the quality of his life." This was, therefore, to be an objective of the JSS program (MOE, 1974).

Connected with this goal is the preparation of individuals to be employable in whatever economic circumstances they might find themselves. Therefore, the Dzobo Committee argued that the kind of knowledge, skills, values and attitudes which the JSS graduates would have acquired, particularly those whose education would have been terminated at the conclusion of this level, would make them "more employable" (MOE, 1974).

One of the problems in Ghana, as in many other developing countries, has been the relevance of the education which the students receive to their future employment, especially for those who have to leave school to earn their living after having acquired only a basic education (Foster, 1965; 1966; Bacchus, 1979; 1986; Lillis and Hogan, 1983). In terms of employment, the total labor force in Africa in the late 1980s (including the unemployed) was 250 million, while there were only 25 million positions available in the modern sector. In addition, there were 15 million new entrants to the labor force every year (mostly school graduates) during the same period, yet no additional employment opportunities were being created for them (ILO, 1988). Before the JSS program was initiated, only 33% of basic education graduates proceeded to the secondary school level, the remaining 67% joined the labor force to compete for the limited number of jobs available. For this reason, the Ministry of Education in its publication[2] reiterated the need for a more "relevant" curriculum (MOE, 1974).

This "vocational" orientation of the JSS program was confirmed by senior officials of the Ministry of Education who were engaged in supervising the implementation of the program and were interviewed by the researcher. They explained that the acquisition of knowledge and skills through the JSS diversified curriculum was an attempt to make education in Ghana more relevant to individuals, their communities, and to the nation as a whole. One senior Ministry of Education official, commenting further on this point, remarked that, since colonial times, Ghana has been searching for the type of education that would make the school graduates "more useful" and "productive". He argued that the JSS program provided the answer to this problem because "it offers both academic and vocational (skills) courses."[4]

The MOE's attempt to expose children to diversified educational courses, to reveal and develop their talents and capabilities for productive employment through the JSS program, was, therefore, an effort to emphasize the use of the 3 H's--head, heart and hands--with the head representing knowledge, the heart representing attitude, and the hands representing practical skills (MOE, 1987).

Although it was categorically stated in the Ministry of Education document[2], that the JSS program was "pre-vocational" and expected to help solve the "unemployment problem" among school graduates (MOE, 1987), the senior officials of the Ministry of Education interviewed by the researcher flatly refused to define the program as pre-vocational. They countered that the introduction of pre-technical and vocational courses into the JSS curriculum was merely "a formal departure from the curriculum inherited at Independence," and that it was an attempt to expose students to their various talents in sports, farming, academic, and vocational skills. But it was not intended to help solve unemployment problems. The senior MOE official[4] further claimed the JSS Program would produce "better artisans" for the country even if the graduates from the schools were unemployed. The aim of the JSS program was, therefore, to provide a new school curriculum for the students, different in nature and content from that previously offered.

In contrast, the Ghana Education Service (GES) officials who were interviewed argued that the program was pre-vocational and was intended to help solve the unemployment problem among those being educated. Elaborating on this point, a senior GES official[6] contended that the diversified curriculum was aimed at equipping students with knowledge and skills and widening their occupational choices. This demonstrated that the program was pre-vocational. Furthermore, he concluded that the program was introduced to make students "employable" so that those unable to proceed to the Senior Secondary level after the JSS course could enter into self-employment, again to help reduce the unemployment rate.

However, he also cautioned that, since the program was pre-vocational, the skills acquired during the 3-year course did not qualify the graduates as "experts" or skilled workers. Instead, these graduates would need to be apprenticed so that they could pursue "further" skills training in their chosen fields either under master craftsmen in the community or by joining a local firm which offered that particular skill or trade (Ibid.).

Observations

The policy of using the JSS program to offer a more relevant educational alternative which would help students cope with the increasing unemployment situation in the country was based on both the Human Capital theory, and the pragmatist and populist ideals identified in chapter three.

The Human Capital Theory was evident in the MOE's attempts to develop knowledge and skills among students through the diversified nature of the JSS curriculum, and to help those unable to advance to the Senior Secondary level "adjust" to the economic realities of the new milieu in which they would find themselves after graduation.

As mentioned previously in chapter three, the Human Capital Theory proposes that a country's economic growth is generally dependent upon its ability to invest in its human resources. It claims that the inculcation of knowledge and skills among the young will produce "quality" workers for increased productivity. This makes them more employable, an achievement which is supposed to eliminate unemployment and also generate job opportunities at all levels in the society. But as mentioned in chapter three, later research evidence (Blaug, 1973; Woodhall, 1978) challenged these claims. Rather, it was discovered that economic growth depended upon several factors including the economic infrastructure of the society, markets, capital and rate of economic and industrial expansion rather than on trained human resources alone. More importantly, it was concluded that, by itself, the development of skills without adequate job opportunities or job creation activities in the economy was not sufficient to solve the unemployment problem.

The MOE's policy regarding the relevance of the JSS program contended that the former middle school curriculum was simply preparing its graduates for a limited number of white-collar jobs, thereby contributing to an increased level of unemployment in the country (see Table 8). Yet, despite this argument that the former curriculum exacerbated the unemployment situation, there was considerable ambiguity surrounding the definition of the goal of the JSS program by giving it some vocational or pre-vocational objective. On the one hand, Ministry officials attributed the increasing unemployment rate to the previous education program, while on the other they were reluctant to officially define the program as pre-vocational and confirm that it was being implemented to help solve the country's unemployment problem. Yet, one of the basic goals supporting the introduction of the program in the schools was precisely to prepare its graduates to be better equipped to enter the workforce. In addition, since pre-vocational programs are themselves not vocational, they are unable to fully equip students with specific job skills. It was, therefore, not clear how the JSS graduates could secure jobs based on the skills

Table 8
General Level of Unemployment in Ghana: 1986-1989

Year	Unemployment Rate (%)
1986	25.7
1987	28.3
1988	28.7
1989	29.7

Source: ILO (1990), Bulletin of Labor Statistics.

they had acquired in school, and thereby help reduce the unemployment problem.

However, even if the lack of clarity of the goal of the JSS program was overcome by the MOE, the fact still remained that without the creation of jobs to absorb the type of skills being developed, unemployment among JSS graduates would continue to grow because their numbers would multiply in greater proportion to the number of jobs available. (As observed in chapter three, this was confirmed in the findings produced by Lauglo et al (1985) in Kenya, and by Psacharopoulos (1985) in Tanzania and Columbia). And unfortunately, no changes had been proposed in the economy in Ghana to run concurrently with the JSS program which would help to increase the absorbability of the economy for such graduates.

The stagnant, in fact, degenerating nature of the country's labor market can readily be observed in Table 9. In 1981 alone, 116,000 secondary school graduates joined the labor force and competed for the only 31,000 jobs available (ILO, 1988). Added to this was the fact that average annual growth of the labor force rose from 2.7% between 1980-1985 and was projected to rise by 2.9% for the period 1986-2000 (UNESCO, 1989). The deterioration of the situation becomes evident from these projections.

Furthermore, since 1981, (when the PNDC assumed office) a government directive has halted recruitment in all sectors of the civil service because government had no funds to pay any additional salaries. In addition, as part of the current World

Table 9
Total Number of Available Employment Positions in Ghana: 1976-1981

Year	Total No. of Available Jobs
1976	63,300
1977	54,600
1978	60,300
1979	38,800
1980	36,200
1981	31,000

Source: WORLD BANK (1984), Ghana: Policies and program for adjustment.

Bank structural adjustment policy since 1986, the government has been required to shed 45,000 (15%) jobs over a period of three years (Africa Report, 1987), bringing the total of civil service positions to 255,000. This action has come at a time when 150,000 - 200,000 school-leavers are entering the job market each year (Africa Report, 1987).

Yet another factor aggravated this predicament of increasing unemployment--the lack of raw materials required for manufacturing goods. This had compelled industries to close down, resulting in even more workers becoming redundant. The lack of raw materials was due to very low import credits (foreign exchange) available to the country. According to the World Bank, by mid-1988 the net worth of foreign exchange reserves in Ghana was negative, having been completely eroded by large foreign exchange losses and a high proportion of non-performing loans. It was estimated by the World Bank that restructuring the banking system in the country would cost at least $300 million or nearly 6% of Gross National Product (GNP), another debilitating burden on the nation's economy.

In the case of self-employment for JSS graduates, several drawbacks surfaced. First, most graduates would be fourteen or fifteen years of age and not considered to be old enough to go into any meaningful employment on their own, much less qualify for a loan from the bank to start a business. The other major problem affecting this objective was that, even if the JSS graduates did decide to go into self-employment and had financial support, it would still be difficult for them to find markets for their goods since established tradesmen already over-produced for the existing limited market. Again, poor road networks and ever-rising transportation costs would devour any meager profits made. Thus, though the development of knowledge and skills for self-employment might appear a sensible goal, the practicality of utilizing such knowledge and skills for this purpose seems non-existent in the Ghana's current economic context.

The objective of using the JSS program to develop more favorable attitudes and values among students, to help them realize and respect the "dignity" of manual (agricultural) work, characterized the pragmatist and populist ideals of general education. As discussed in chapter three, the pragmatist and populist philosophies hold that the school curriculum should be related to the occupations of the society in which the student would eventually live and work. Education should therefore not be solely academic in its content. But adopting this concept of general education implies that the society would have a growing industrial base or economy to productively absorb and utilize the diverse skills produced by the schools. The present inability of Ghana's economy to employ this asset for national or individual development continues to create within the people a low opinion of manual or skilled education, causing it to further lose social credibility and support.

Traditional farming barely satisfies even a "hand-to-mouth" existence in the large and poverty-stricken rural sector. Consequently, the attitude developed during the colonial times that manual jobs were related to slavery and punishment still continues to dominate the popular view of such work (Altbach & Kelly, 1978). The lack of rural development including good drinking water, roads, and health care centers, also adds to the low esteem accorded to rural work and rural life.

Because of these reasons, even the "successful" implementation of the JSS program is no guarantee that its graduates would be willing to settle and assume occupations in the rural sector. Students may study farming, fishing, etc., and be inundated with the right values and attitudes, yet there is no reason to believe that such exposure would create within the student body favorable attitudes toward such occupations (Foster, 1966).

To attempt to achieve a more "relevant" educational program which would satisfy the needs of each individual, locality, and the country at large through the JSS program is, therefore, quite unrealistic. Although there are common national needs in Ghana, such as the need for economic growth and equality of opportunity, there are numerous and varying interest groups with diverse specific needs. But the MOE policy does not specify what are these "local needs" and "individual needs"; neither, does it indicate what are the "regional needs" and "national needs" to be met through the program. Yet the program is expected to be relevant to all these sectors of society.

Basic local needs range from better roads, good drinking water, health care, electricity, and transportation, to education and housing. In 1981 only 35% of the country's population had access to safe drinking water, of which 86% were of the urban population as opposed to 14% of the large rural population (World Bank, 1984). Individual needs, of course, are unlimited, but would include such basic factors as higher earnings, proper shelter and food for the family, and status. National needs would include socio-economic growth and political stability. Therefore, without specific clarification of the needs to be met through the JSS program, the most "effective" and "relevant" curriculum cannot be developed.

Thus, improving the educational content of the Junior Secondary School curriculum will be difficult to attain until the issues discussed can be examined and resolved. Only then can the program attempt to become "relevant" and effect the desired socio-economic structural transformation.

GOAL NUMBER FOUR

Background

The fourth goal of the JSS program was to help reduce the overall expenditure on education through the development of a "cost-effective" educational program and a "reduction in the duration of the country's pre-university education" (MOE, 1987).

The belief in educational investment for national development among the developing nations, including Ghana, since the 1960s has compelled the governments of these societies to invest heavily in education to achieve national growth. As a result, Ghanaian government expenditure on education in relation to total spending rose fairly substantially (see Table 10). In 1990 alone, the government spent ¢58 billion on education--about 40% of the recurrent budget (Home Front Magazine, 1990). Similarly, in 1987, public current expenditure on education represented 3.4% of the GNP (UNESCO, 1990). But despite these large educational budgets, a great number of school graduates continued to be unemployed. They were very likely not making any returns to this large investment on their education in the form of services and increased productivity to society at large.

However, regardless of the educational budget increases, the per capita expenditure on education has decreased from US$20 in 1972 to US$10 in 1979, and to US$1.00 by 1983. Currently the figure is US$0.80 per head (World Bank, 1989; West Africa, 1989). This sharp decrease was due to larger enrollments as a result of the rapid population growth, and most especially to the enormous devaluation of the Ghanaian currency, particularly since 1986 with the World Bank's structural adjustment policy (see Table 11).

Further, as posited by the Dzobo Committee (MOE, 1974), the extremely long duration of the former pre-university course in Ghana (17 years) consumed far too many resources, required additional human and physical capital investments, and delayed the

Table 10
Government Expenditure on Education Expressed as % of Total Spending

Year	Education
1972	20.1
1986	23.9
1988	25.7
1989	29.7

Source: UNESCO (1989), Statistical Yearbook.

Table 11
Devaluation of Ghana CEDI (¢)

1981	US$1	= c6
1986	US$1	= c250
1990	US$1	= c357

Source: Europa Yearbook, (1990).

personal advancement of the students in society (MOE, 1974). It therefore recommended the duration be reduced from 17 years to 13 years (this has been further reduced to 12 years as indicated by Figure 1).

The low return of education investments and program duration were further discussed with a senior MOE official[7] who was interviewed by the researcher. He observed that, although previous governments had invested heavily in the development of education, the eventual "usefulness" and "productiveness" of students was ignored. He continued to suggest that the JSS program would equip its graduates with the necessary knowledge and skills for employment, thereby producing better investment returns. This would make the program more "cost-effective." The shorter duration of the new education system also would make available "more funds" which could be used to improve the quality of education, increase access, help build more schools, provide additional resources, and produce more qualified teachers." In general, the new system would save both time and money to aid in the educational development of the country.

Observations

First, although using increased productivity as a cost-effective indicator is a reasonable approach to estimate the value of education to the economy, the MOE has not indicated how such increased productivity would be measured, since productivity is based on several factors including effective management,

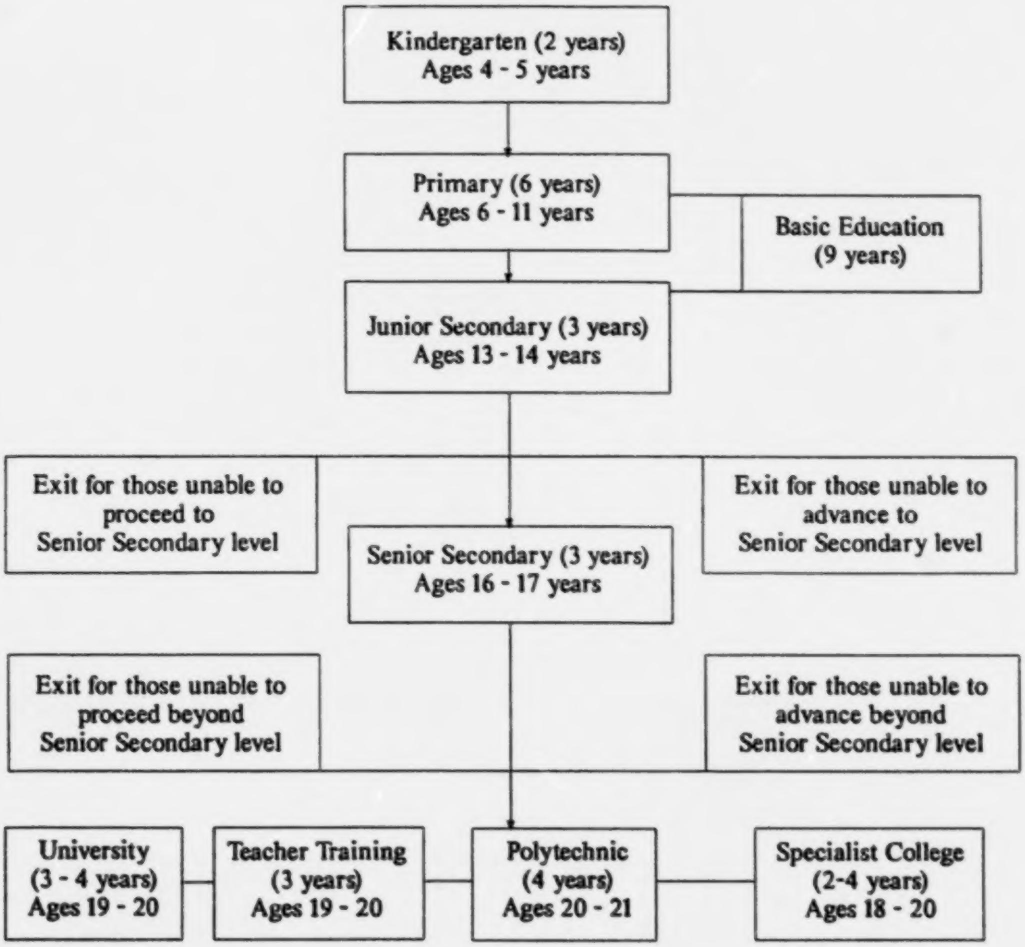
Kindergarten (2 years)
Ages 4 - 5 years
Primary (6 years)
Ages 6 - 11 years
Basic Education
(9 years)
Junior Secondary (3 years)
Ages 13 - 14 years
Exit for those unable to
proceed to
Senior Secondary level
Exit for those unable to
advance to
Senior Secondary level
Senior Secondary (3 years)
Ages 16 - 17 years
Exit for those unable to
proceed beyond
Senior Secondary level
Exit for those unable to
advance beyond
Senior Secondary level
University
(3 - 4 years)
Ages 19 - 20
Teacher Training
(3 years)
Ages 19 - 20
Polytechnic
(4 years)
Ages 20 - 21
Specialist College
(2-4 years)
Ages 18 - 20

Figure 1. New Structure of Education
Diagram Based on Ministry of Education Interpretation of
the New Structure of Education, 1990.

financing, expanding market, and availability of raw materials.

Second, the argument that the JSS program was not expected to turn out "skilled experts" posed the question: If the students were not being specifically prepared to enter the workforce, particularly those 70% unable to advance to the Senior Secondary level, how could this scheme be cost-effective? Additionally, the cost-effective objective was also dependent on the successful implementation of the program, on the state of the national economy and its ability to absorb and utilize these skills. Yet, though the program was in its fourth year, no specific plans had been mandated to ensure the attainment of this objective.

Thus, again a major goal has been developed but not adequately thought through. It did not define specifically what was implied if the objectives were to be achieved and, more importantly, how desired ends were to be attained.

GOAL NUMBER FIVE

Background

Goal number five was the use of the JSS program to foster a sharing of financial and other responsibility for educational development between government and local communities, (MOE, 1987). Since vocational education programs are usually quite costly, a major implementation constraint is usually financing. Expensive vocational equipment and materials, plus the additional salaries needed to hire vocational teachers requires far more funds than regular academic courses. These extra costs cannot usually be met by the central government alone. Therefore, local communities are often called upon to share in the financing. But in Ghana, as in many other LDCs, the destitution of the people, particularly in the large rural communities, prohibits this type of contribution, which frequently leads to the collapse of such vocational programs. This was true of the Continuation School Program (1969/76).

In connection with community involvement in the JSS program, the Ministry of Education publication stated that "the development of the Junior Secondary Schools would be mainly the responsibility of the communities[2]". The various MOE officials interviewed by the researcher indicated that the decision resulted from "worldwide inflationary trends" which, according to them, had seriously raised the cost of educational resources, building materials, teacher salaries, and the cost of teacher training programs.

In 1983, for example, inflation in Ghana was 122.9%. By 1988 this had eased some to 25% (World Development Report, 1990) but this rate was still considerable. In 1988 the minimum salary for a trained teacher, therefore was, raised from ¢8,000 to ¢12,000 per month to compensate for inflation (GES, 1990). The implications of this, in terms of additional cost to the government for its approximately 100,000 teachers, were substantiated.

A senior MOE official[3] saw the government's decision as "timely", stating that, due to the "high cost" of implementing the JSS program, it was necessary for the local communities to be "fully and actively" involved in sharing the "burden" of financing with the government. He concluded that, if Ghanaians wanted "good quality" education for their children, they must be prepared to "pay" for it (Ibid.).

In a separate interview with a senior official of the Ministry of Local Government[8] it was explained that the government's decision to get communities involved in helping to meet the cost of the JSS program was one of the major reasons for its recent decentralization policy. This policy gave "autonomy" to the newly-formed district governments, each district becoming "responsible" for educating its own people by providing them with the entire basic education course (this included the JSS program). Upon being asked if the central government would provide any financial contribution to the local communities, the MOE official assured the researcher that the central government would continue to provide the "necessary" basic resources (i.e. teachers, books, etc.) and also pay all teacher salaries (which forms about 90% of the total education budget) (MOE, 1974).

The communities then, as indicated in the MOE document[2], were expected by the government to provide "JSS buildings (classrooms), furniture, annual book user fees, and JSS Final Year Examinations fees of ¢2,500 per candidate. In addition, the local craftsmen were "requested" by the government to "volunteer" (i.e. they would not receive any salaries) to teach their skills or trade to the JSS pupils in their community (MOE, 1974). This was another effort by the central government to get local individual and groups to share the burden of financing education in the country.

Observations

The system of community financed education in the LDCs, especially the financing of vocational education, has generally met with failure, particularly in Africa (Lillis, 1985) due to the deplorable rural economy and the low incomes of the rural population. In Ghana, the extent of community financial involvement required by the government had not been weighed against the realistic potential of the people, particularly those in the large rural communities. Even the wealthier urban communities such as Accra and Kumasi, where the average income was about eight times higher than in the rural sectors, were not able to afford sharing this responsibility with the government, especially to the extent that was required. While the urban community Junior Secondary Schools had been in operation since 1987, most of the rural communities, as of 1990, were still constructing their JSS buildings due to lack of funds. It cost ¢600,000 to renovate and paint one urban Junior Secondary school. The parents were expected to pay 66% of this cost, while the central government offered 34%. In a rural setting it was unlikely that a community could afford to meet such a cost. In one rural junior secondary school visited by the researcher, teachers taught in classrooms without roofing! In another, rural community school classes were held in the local church. Many communities had their

JSS classes in sheds and frequently under the trees.

In a desperate attempt to meet the requirements imposed on them as a result of the government's policy, some rural communities had resorted to a system of making a financial levy on all adults. Those eighteen years and over were on the average charged ¢2,000 per male and ¢1,000 per female. In one town a levy of ¢5,000 per head was placed on all citizens of that community living outside Ghana. Of course, holding town meetings for the chief to announce the levies was easier than actually collecting the monies. To raise even ¢5 was a difficult task in some of these areas. With the declining economic situation in Ghana, most rural parents were more concerned about feeding their families rather than worrying about making financial contributions toward the JSS program in the village.

Moreover, even if the rural communities were able to provide the JSS buildings, the problem of furnishing them with tables, chairs, etc. would still remain. The researcher observed in all the junior secondary schools visited, even in the towns, that only those students whose parents had purchased desks and chairs for them were not either standing or lying on the floor to do their class work.

Finally, asking local craftsmen to volunteer their precious time to teach vocational education subjects, since there was an insufficient supply of teachers for the task, was expecting too much from them. They, like other citizens, needed their time to earn enough to feed their families, particularly considering their meager incomes.

The government policy of shared responsibility, therefore , contributed to the ever-widening disparity between rural and urban educational opportunities and made the implementation of vocational education programs more difficult. If the decentralization policy was a step by the government to shift the burden of educational financing onto local communities and parents, it had created another potential threat to the implementation of the program since nearly 80-85% of the local communities were unable to meet their portion of the costs without more government assistance. The future of the entire basic education course, including the vocational component, was therefore being jeopardized by this policy.

CONCLUDING REMARKS

As in the past with vocational education projects developed by the country, the goals of the JSS program appeared sensible and "relevant". However, a closer examination has revealed that the goals were too broad and that they could not be translated easily into attainable goals. Second, there appears to be a wide disparity between goal statements and ability of the nation to realistically achieve them. The means or methods required for the achievement of these goals were usually absent. This became more evident with key aspects of the program, including curriculum development, the supply of equipment, resources and qualified teachers, especially for the practical subjects which were to be taught as part of the vocational dimension of the program.

Finally, like their predecessors, the current government and the Ministry of Education continued to assume, quite incorrectly, that the school curriculum was to blame for the numerous socio-economic issues, including unemployment among the educated. In other words, they persisted in disregarding the fact that the major contributing factors to these problems were the nature of the economy, the occupational and income structures of the society, and the negative attitudes of parents and students towards the introduction of vocational education of any kind in their schools. Despite the rhetoric about improving the relevance of the school curriculum, it would be seen that the chances of the program being successfully implemented were poor. In addition, the JSS program was not likely to contribute to the solution of the socio-economic problems without corresponding changes in the many aspects of the established structures of these societies. The relevance of the program could only be improved when the knowledge and skills acquired from the JSS courses could be productively utilized by the graduates when they entered the "world of work" after leaving school.

CHAPTER VII

IMPLEMENTATION STRUCTURE OF THE JSS PROGRAM

Introduction

Through interviews with officials of the Ministry of Education and the Ghana Education Service, it was ascertained that these two major educational bodies were entirely responsible for the implementation of the Junior Secondary School Program throughout Ghana. Since the Ministry represented the Government, it set the overall policy with respect to the program, as well as formulated more concretely its aims and objectives. It also supervised the ongoing implementation of the program. The GES was responsible for implementing the policies, and even had to use strategies dictated by the MOE at regional, district and school levels. It was, therefore, the field implementor of the program and, as a result, within the overall structure its staff were regarded as subordinate to those of the Ministry of Education.

According to the Ministry of Education officials interviewed, the current Government made the GES subordinate to the MOE in the implementation of this project because of the earlier failure by the GES to make operative the Experimental JSS Project from 1976-1986. The GES officials were accused of being "apathetic" and lacking both the"interest and commitment" necessary to ensure that the program was successfully implemented. One MOE official[9] also suggested that, instead of implementing the JSS project, the GES became more of "a teachers' welfare organization" and also "assumed authority" over all educational matters in the country, dwarfing the responsibility and power of the MOE. A second official[3] further remarked that, between 1976 and 1986, the Ministry of Education had minimal responsibility with regard to the implementation of the Experimental JSS project. He alleged that, despite the government's decision to raise the status and power of MOE officials, the teachers seemed to "respect" GES staff more than they did those from the MOE. What was obvious to the researcher was that there was a power struggle between the two government agencies, and an effort on the part of the Ministry of Education to re-assert its dominance in all educational matters. The subsequent loss of authority for the GES in 1987 further increased the tensions between it and the MOE in the implementation of the current JSS program.

One implementation strategy adopted by the MOE was to make the project "all Ghanaian". The participation of foreign experts or consultants and the use of foreign models was rejected and this was considered an additional strength of the program. One senior MOE official[9] explained that the foreign models tried since colonial times had failed because they had ignored the needs of the people and communities in Ghana.

In February of 1987, a consultative committee was formed by the Ministry of Education to oversee the planning and general implementation of the JSS initiative. The committee at that time was referred to as the "National Advisory Committee for Training of JSS Teachers", though currently it is known as the "National Planning Committee for the Implementation of School Reforms (NPCISR). This committee occupied a strategic position in the implementation structure of education policies and programs adopted by the MOE. Table 12 shows the composition of the NPCISR.

Structure

According to the MOE officials interviewed, the Secretary and Deputy Secretary for Education were directly appointed by the central government. The Secretary for Education was responsible for the overall development of all levels of education--i.e., basic, secondary and tertiary education--in the country. His major roles were to interpret government policies to the MOE for implementation and to serve as the mouthpiece of the government. In these capacities he was the main link between the government and the Ministry of Education in connection with the country's educational matters. In addition, the Secretary had the final authority to approve all departmental funds, purchases, contracts, payments and implementation strategies. One interviewee remarked that "nothing about the JSS program gets done here without the Secretary's approval. Every decision must receive his signature before we (MOE) can implement it." The Secretary for Education relied on his deputy to scrutinize all information and reports concerning the progress and problems of the program.

On a day-to-day basis it was the Deputy Secretary for School

Education who was responsible for the implementation process of all aspects of the project which were executed by the various units of the MOE and the GES. As chairman of all NPCISR meetings, he served as the main link between the NPCISR and the Secretary for Education. He was responsible for outlining the goals of the program to the NPCISR and explain how the Secretary wanted these goals implemented.

The basic role of the NPCISR, according to the MOE document[1], was to "outline the goals" of the program and to "plan" the implementation strategy for the Ghana Education Service subject to the ultimate approval of the Deputy Secretary and through him the Secretary. The responsibility for implementation strategy included the "selection of personnel and creation of departmental units responsible for the field work connected with the program at the national and district levels" (MOE, 1987). A member of the NPCISR[10] explained that this body would also discuss reports and proposals associated with the program that were submitted by the various basic education units within the MOE and the GES. The NPCISR, however, organized workshops (inservice courses) for JSS teachers. The MOE document[1] indicated that about eight such courses had been organized for 30,000 teachers and teacher-trainers since 1987. In addition, the NPCISR member[10] told the researcher that the Committee's members were "empowered" by the Ministry of Education to carry out both "announced and unannounced" monitoring and evaluation of the program's implementation in the Junior Secondary Schools.

The Ghana education Service (GES) was the field implementor of the program at the district and school levels and, thus, it was responsible for appointing District Assistant Directors, District JSS Coordinators, and staffing all Junior Secondary Schools. Additionally, it was responsible for organizing inservice training courses for the JSS teachers.

To facilitate communication and smooth administrative relationships between the GES and the MOE, the latter appointed a coordinator for the basic education section within the GES. The coordinator was, therefore, the mouthpiece of the MOE as well as being responsible for submitting GES reports, proposals and requests to the Ministry of Education for approval.

The next position of authority in the implementation structure was the Regional Director of Education who acted as the main link between the GES and the district JSS administrators, who were directly responsible to the GES. It was his duty to collect and synthesize district JSS reports and submit them to the GES as a "regional report." The GES, in turn, passed the report on to the Ministry of Education through the appointed coordinator. Through this channel the MOE was informed of the regional needs, problems, and progress in relation to the JSS program. The Regional Director also forwarded any feedback, regulations, policies, and information about in-service programs from the GES to the District Assistant Director of Education for

Table 12
Composition of the National Planning Committee for the Implementation of School Reforms (NPCISR)

Deputy Secretary for School Education	Chairman
Ministry of Education (MOE)	5 members
Ghana Education Service (GES)	8 members
Universities	8 members
Ghana National Association of Teachers (GNAT)	2 members
National Teacher Training Council (NTTC)	1 member
National Vocational Training Institute	1 member
Program Management Unit - Education Sector Adjustment Credit (PMU/EDSAC)	4 members
Retired Educationist	1 member

Source: Ministry of Education, Accra, 1987.

implementation, paid occasional visits to the district administrative centers in the region to acquaint himself with situational problems, and assessed the administrative competence of the staff at the district level.

At the district level, two authorities were involved in the implementation of the JSS program: the District Assistant Director and the District JSS Coordinator, the latter being accountable to the former. The District Coordinator was a JSS teacher promoted to this position. The Assistant Director, however, was a GES senior administrative official. His background qualifications and that of the Regional Director were about the same, and this had created a power struggle between the two authorities. The District Assistant Director was responsible for the implementation of the program in the district junior secondary schools. Specifically, he visited the schools, circulated MOE orders among JSS headmasters, supervised GES-sponsored district workshops for JSS teachers, and submitted district reports on the program to the Regional Director.

The District JSS Coordinator visited the Junior Secondary Schools in his district to collect information on problems affecting teachers and students. He also informed the JSS headmasters and their staff of MOE directives concerning the program, dates for district JSS workshops (inservice courses), and expected arrival of equipment and resource allocations at the

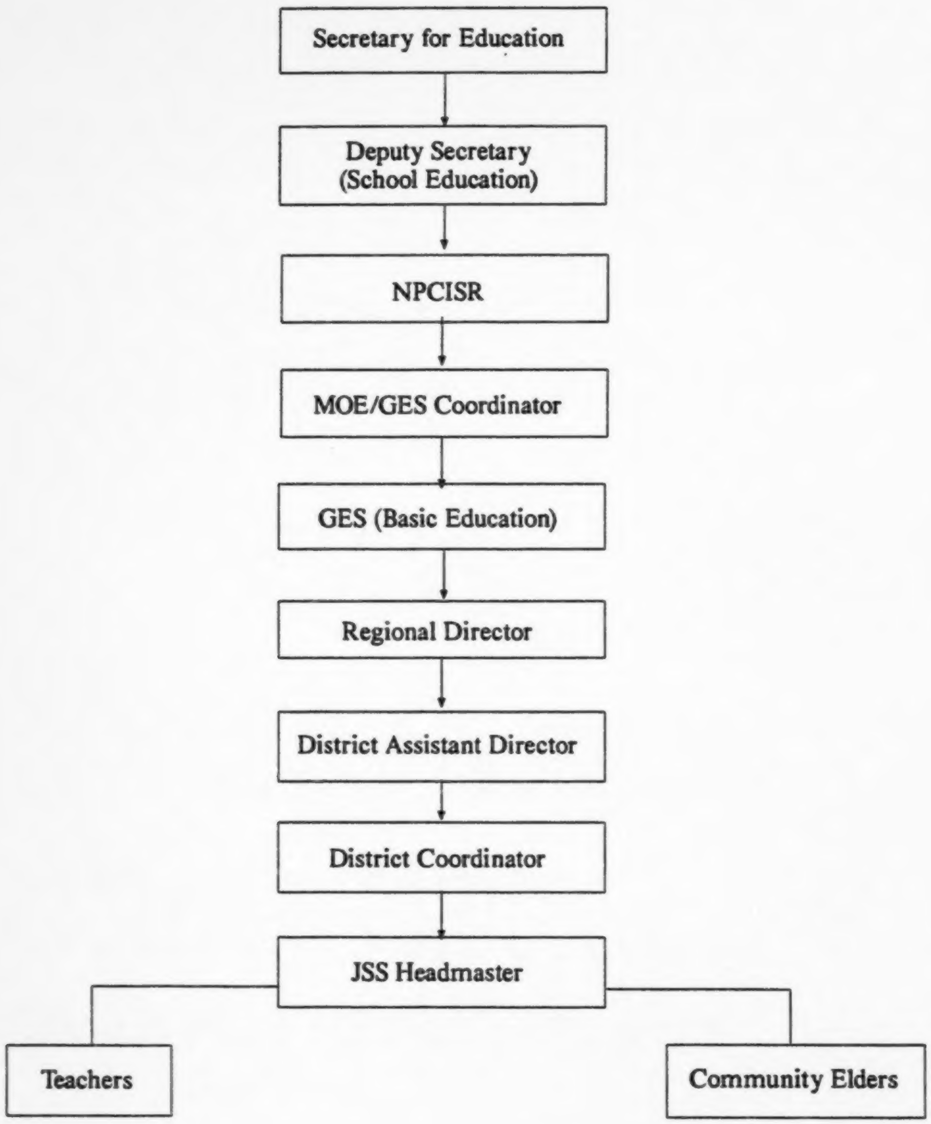
Secretary for Education
Deputy Secretary (School Education)
NPCISR
MOE/GES Coordinator
GES (Basic Education)
Regional Director
District Assistant Director
District Coordinator
JSS Headmaster
Teachers
Community Elders

Figure 2. Implementation Structure
Diagram Based on Interview Responses by MOE Officials

district depot for collection. Finally, he submitted his reports to the District Assistant Director.

At the school level, the JSS headmaster, in addition to being an integral part of the teaching force, supervised the classroom implementation of the program and the instructional activities of the teachers. He was also the representative of the teachers in his school at official meetings with the local community elders concerning the JSS program. At these meetings, the elders were informed of the many problems facing the teachers and students and how the community could help resolve such issues. The headmaster was accountable only to the District Assistant Director.

The JSS teachers, who were effectively the classroom implementors of the JSS curriculum, were under the supervision of both the District Assistant Director and the headmasters of the local schools.

The role of the local community has already been indicated. However, it was also the responsibility of the community elders to attend meetings and hold discussions with the headmaster and staff members to find appropriate strategies for administering the affairs of the school.

Observations

Though implementation of the JSS program appeared to be well-organized, interviews with individuals from the varying ranks of the implementation structure revealed three major problems which continued to actively undermine the entire structure. These were:

(1) "the top-down" nature of the decision-making process; (2) the unclear role definitions; and (3) the power struggles between the GES and NPCISR officials as well as between Regional Directors and District Assistant Directors. These three problems will be examined, especially as they affected the successful implementation of the JSS program.

The organizational structure of any implementation strategy is important, since its effectiveness, efficiency, and flexibility contribute immensely to the success or failure of the innovation (Gross et al, 1971; Hurst, 1983; Fullan, 1982). The personnel, groups, and departments comprising the structure must possess and display effective and efficient professional, managerial, and administrative skills to give purposeful direction to the implementation exercise. A weak and disorganized structure will severely jeopardize the implementation of any program for which it has responsibility. Additionally, the structure must be flexible enough to create effective, two-way communication and feedback mechanisms between planners, implementors and all other actors involved in the implementation (Rogers & Shoemaker, 1972). In other words _all_ views, opinions, and suggestions offered by the various groups and individuals within the implementation structure must be respected and treated with importance to gain loyalty and commitment from all who are involved in the exercise.

Feedback from implementors or subordinates is crucial, as it allows this group the opportunity to inform top management (planners) of their progress as well as their problems. In the opinion of Havelock and Huberman (1977), not only does this enable management to analyze discrepancies and search for and apply corrective actions; it also reassures participants within the structure that their opinions are valuable and are usually acted upon. Again, it indicates that the implementation of the program is a dynamic process in which all experiences and judgments play an integral part (Havelock & Huberman, 1977).

The JSS implementation structure, developed expressly by the MOE, appeared to be a "top-down" decision-making mechanism. This virtual one-way flow of authority seemed to be the source of considerable frustration, low morale, disappointment, apathy, anger, and doubt among GES officials and other subordinates within the system. The comments of a GES official[11] confirmed this when he asserted that: "I am not sure whether we (GES) are a part of this program's implementation or not. All of us, including our Director-General, have to wait for approval of even the simplest decisions (from the Secretary of the MOE) before we can act." In a District Assistant Director's[12] opinion--"They (the MOE) should allow us to take decisions on urgent issues without having to wait for several months, when the job could have been finished long ago." Another District Assistant Director[13] similarly commented, "It takes about three months or more for a reply to reach here, yet we are only thirty (30) miles from Accra." These comments represented the frustration and anger felt by various officials holding positions at a subordinate level within the structure, and demonstrated their feelings of helplessness in the decision-making process. The structure thus failed to establish and use feedback and flexible mechanisms to assist in the implementation of the program.

Second, the organizational structure also had resulted in vaguely defined roles with respect to the various implementors of the program. In particular, the MOE planners and decision-makers of the program were allowed to cross role boundaries to duplicate tasks already assigned to specific groups, departments, or individuals within the structure. This had created anger among some implementors who claimed that their positions and professional expertise were not being respected. A GES official's comments illustrate the point: "We (GES) are the field implementors of the program, yet in-service courses for teachers (which is our duty) are organized without our knowledge. All we do is take part in the exercise whether or not we agree with what has been planned."[11]

Similarly, the structure failed to clearly define the position and role of the Deputy Secretary for School Education and the Director-General of the GES. The renewed reallocation of power and authority to the MOE, for all aspects of education, including the JSS program, had diminished the importance and authority of the GES and the Director-General in particular. The Director-General had no specific role in the structure and seemed to exist only as a figurehead of the weakened Ghana Education Service. This had also increased tensions between the two top executives.

The current government decentralization policy, which gave "more autonomy" to district level administration and management in both government and educational matters, also had given more power and authority to the District Assistant Directors. These Assistant Directors were more involved in the administration and the decision-making process with the communities, concerning the JSS program at the district level, than the Regional Directors. Since the decentralization policy made the districts accountable to the central government, and not to regional administration, the role of the Regional Director was unclear and the position virtually inactive. Most District Assistant Directors sent their reports directly to the Ministry of Education. The latter also replied directly to the District Assistant Directors. The Regional Director was by-passed in these and nearly all other matters. This situation had encouraged the District Assistant Directors to put pressure on the MOE to upgrade their status to the rank of District Directors--a proposition fiercely opposed by the Regional Directors because their positions were likely to be deemed unnecessary and thereby eliminated.

The power struggle engendered by this unclear role definition was observed by one District Assistant Director[12] who commented, "Because of this conflict between us and the Regional Directors, district reports sent to the regional office are never forwarded to Accra." He saw this as an attempt to "sabotage" the genuine efforts of the District Assistant Directors, and added that such actions undermined the successful implementation of the entire program.

Finally, the structure failed to clarify how the District JSS Coordinators should travel to deliver messages and collect reports from the schools. It appeared that the schools rarely received visits from the coordinators. As one JSS teacher[14] observed, "We simply do not know what is going on in the district, yet they tell us we have a coordinator." Another teacher[15] added, "We still have not seen him (the coordinator) since September (1989) up until this time" (April, 1990). The irregular visits by the coordinator had caused teachers to miss important district workshops, while headmasters had failed to collect their school allocations from the District depot because the coordinator either did not inform them, or was very late in doing so. This situation had created bitterness, anger, and frustration, not to mention disrespect for the coordinator's position as a whole. According to the JSS teachers interviewed, the headmaster would be a "better" link between the district center and the school.

What the teachers had not recognized though, was that this was not entirely the fault of the District JSS Coordinators. The comments of a District Coordinator[16] confirmed this: "We need some means of transportation or they (the MOE) should give us money for public transportation, or else we can only visit the schools just around the corner." The planners failed to recognize that transportation facilities for the Coordinators were crucial to the performance of their duties. If these coordinators were to play an effective role in the implementation of the JSS program, funds would have had to be allocated to facilitate their movements within the district, particularly in the rural areas where lack of transportation was a major problem. Public transportation costs in Ghana (even for a short distance) are extremely expensive, and coordinators should not be expected to use their own salaries to pay for such administrative expenditures.

Conclusion

As with previous programs (e.g. Continuation School Project), the organizational structure established for the implementation of the JSS program appeared to be a hierarchical arrangement having limited flexibility. Thus, among some of the staff involved in the program there has been apathy, anger, frustration and tensions. This did not augur well for the program.

Chapter eight will assess the JSS curriculum, the development and supply of JSS teachers, and JSS examinations policies.

CHAPTER VIII

THE JSS CURRICULUM, TEACHER SUPPLY, AND EXAMINATIONS

THE JSS CURRICULUM

The Junior Secondary School curriculum was designed by the Curriculum Research and Development Division (CRDD) of the Ministry of Education. A senior CRDD official[17] explained that the curriculum design incorporated the recommendations of the Dzobo Committee[5], with "some modifications" to suit the present needs of the students, communities and the country. Figure 3 shows the structure of the CRDD.

As revealed in the CRDD document, The New JSS Curriculum, the program offered a total of thirteen (13) courses. These included:

Mathematics	Science	Social Studies
Cultural Studies	Ghanaian Languages	English
Languages		
French	Agricultural Science	Life Skills
Technical Drawing	Technical Skills	Pre-vocational
Skills		
Physical Education (P.E.)		

(CRDD, 1987.)

These courses were grouped under four main areas - Science, Arts, Vocational and Life Skills (CRDD, 1987).

DIRECTOR			
Head Research/ Evaluation & Measurement Unit	Head Language (Ghanaian, English & French) Unit	Head Mathematics Unit	Head Science Unit
Head Social Studies Unit	Head Technical Education Unit	Head Cultural Studies Unit	Head Vocational Education Unit
Head Home Economic & life Skills Unit	Head Business Education Unit	Head Publications & Library Unit	Head Administration Unit
Physical Education and Agricultural Science have no units in the CRDD. They are taken care of by specialists who are occasionally recruited from outside the Division. Such specialists may come from among teachers in schools and/or regional and district education officers.			

Figure 3. Structure of Curriculum Research and Development Division (CRDD).

Source: Curriculum Research and Development Division, Ministry of Education, Accra, 1990.

The composition of each area was as follows:

Science - Mathematics, General Science, Agricultural Science, and Physical Education

Arts - Social Studies, English Language, Ghanaian Languages, French and Cultural Studies

Vocational - Pre-Technical Drawing, Pre-Technical Skills, Pre-Vocational and Art

Life Skills - Nutrition, Clothing & Textiles, Family Life Education, and Economics (CRDD, 1987).

In terms of uniformity of course content, the CRDD official[17] cited above stated that, due to the centralized system of education in the country, all the Junior Secondary Schools throughout the country studied the same number of courses and used the same textbooks, materials, and content. The only difference permitted in the curriculum was the choice of vocational courses. He explained that the CRDD had outlined the main vocations which were found to be predominant throughout the various regions of the country. These included farming (cocoa, yams, cocoyam, plantain, groundnuts, coconut, copra, rice, fruit, and vegetable), fishing, hunting, cattle rearing, carving, weaving (basketry and traditional "Kente" cloth), pottery, goldsmithing, and blacksmithing (CRDD, 1987). From this list the Junior Secondary Schools were expected to choose *two* dominant occupations practised in the particular region in which they were located and to offer "vocational" courses in them. For example, schools in Ashanti Region might choose cocoa farming and weaving since these were two of the main occupations in the region.

The choice of farming occupations was considered important. It was expected that this would help the school develop "specific" occupational knowledge and skills required of their pupils for these future vocations and improve both individual and community practices in relation to farming activities. Futhermore, the JSS 3 final vocational examinations were to be based on these regional courses.

With respect to the "relevance" of the JSS curriculum, the various CRDD officials interviewed were optimistic, explaining that, if successfully implemented, the new curriculum would provide a more comprehensive and useful approach to studies at the basic education level than the former curriculum. The senior CRDD official[17] assured the researcher that the new JSS courses provided "a higher standard" of education which, in turn, would produce "more qualified" school graduates at the end of the basic education course. These graduates would be better prepared for life, especially in the rural communities in Ghana.

CRDD officials were also quick to mention that, though the curriculum appeared "relevant" and "comprehensive", its actual implementation in the schools faced serious problems. This was verified through interviews with JSS teachers who identified the following problems: lack of communication and evaluation, teacher shortage and increased workload, unequal JSS course time allocation, advanced curriculum content in relation to students' level of comprehension, and an unfair time-table mix.

CURRICULUM PROBLEMS

LACK OF COMMUNICATION AND EVALUATION

Background

Senior CRDD officials commented on the drastic reduction in the staffing of that unit--from 32 in 1987 to 14 today-- which resulted in the Division having no sub-units at the regional or district levels to monitor and effectively "assess" its curriculum design, as originally planned, or to receive feedback from the JSS teachers.

Observations

Generally speaking, educational innovations such as the JSS program have been much easier to conceive though difficult to implement. Policymakers often gave little or no thought to the practical side of the implementation process or, more importantly, to the diverse problems which could arise in such an exercise. Innovations, therefore, often failed, not because the target population had rejected them, but because of a lack of necessary inputs and resources such as expertise, time, manpower, materials, equipment, or financing (Hurst, 1983). These requirements were often neglected or underestimated in planning an implementation design because the authorities concerned were more interested in producing an impressive list of outcomes than in considering the means by which those outcomes could be achieved.

As monitoring was an important aspect of checking whether the inputs were adequate to assure successful implementation, the MOE needed to better equip the CRDD to enable its staff to monitor and evaluate the new and "relevant" curriculum. The Ministry of Education also needed to ensure adequate staffing of the CRDD unit so that communication between curriculum designers and classroom implementors (teachers) could have been effected, thus creating an atmosphere of professional camaraderie that would ensure a greater degree of success for the program. If this communication had been established first-hand knowledge of the various situational problems would have alerted the CRDD in time to make appropriate modifications to the design, thus helping the schools in their implementation.

However, as previously mentioned, the CRDD was inadequately staffed for this purpose. The situation was further aggravated by the absence of an evaluation unit, even within the Ministry of Education or the GES, to conduct formal monitoring and evaluation in the schools. This situation echoes the helplessness of the CRDD in 1985 concerning the implementation of the Experimental JSS project, as observed by Dr. Russell:

> few CRDD people have personal cars, and government transportation is simply not available. Mail is uncertain and slow, telephone is out of the question....It is only by a personal visit to Accra that one can come to appreciate the extent to which this project depends on the provision of vehicles to permit investigators to reach and live at the schools. Even in Accra, data collection cannot begin until the vehicles arrive. These comments are not criticisms of what is going

> on in Ghana but statements of reality. (IDRC Report, 1986).

With such lack of transportation and other facilities, any proper assessment of the outcomes which were expected to the program was virtually impossible. This meant that the authorities were never fully apprised of implementation constraints which existed in the schools. The lack of an evaluation unit and a well-defined assessment strategy can be seen as one of the reasons for the lack of attainment of the goals of the program. In the absence of such a unit, the policymakers had not been fully apprised of the hurdles that needed to be overcome in order to successfully implement the program.

There are a number of reasons why evaluation has often been omitted from program implementation in the LDCs, including Ghana. Some of these are identified by Havelock and Huberman (1977). First, they contend that evaluation is a costly undertaking, both in financial terms (personnel) and in terms of time. Large-scale projects such as the JSS program face the added cost of providing an infrastructure for processing and analyzing vast amounts of data (Havelock & Huberman, 1987). Therefore, in a number of projects prohibitive costs often have been the principal reason for the absence of evaluation. In other programs, evaluations were carried out only when supplementary funds foreign aid were provided from outside the country (Havelock & Huberman, 1987).

Second, the lack of trained personnel to conduct the evaluation has been another reason advanced by management to explain why evaluation units or strategies have not been created (Havelock & Huberman, 1987). That is, even where sufficient funding was available, evaluation could not be done because of a lack of trained or qualified personnel.

Third, unclear objectives have tended to result in a rapid, superficial planning process which made precise evaluation of outcomes very difficult, even when qualified personnel were available (Havelock & Huberman, 1987). Most objectives were left ill-defined so as to be acceptable to all parties concerned, particularly in large-scale implementations like the JSS program. Thus, evaluating the project became very difficult even for the trained evaluator, since he/she did not know what exactly to assess.

Finally, most LDC governments and policymakers tend to prefer summative to formative evaluation strategies (Havelock & Huberman, 1987). This is because most of these innovations have been the outcomes of political directives or decrees. Hence, any on-going (formative) evaluation could prove detrimental to the ruling government, particularly if the evaluation report were negative. In most developing nations, including Ghana, the centralized form of government has imposed innovations on the clients for adoption without any possible opposition to the government decree. Therefore, a negative evaluation report could have adverse consequences for the stability of the government. Not surprisingly, authorities prefer summative evaluation of such programs in the hope that people would have forgotten the promises originally offered by the innovation. Hence, there would be no disturbances resulting from the inefficiency of the government, as indicated in its failure to achieve its own set objectives. It is not unusual, then, for evaluation efforts and suggestions for improvement that could emanate from governments to not be readily forthcoming. In the case of the JSS program, it could be argued that the absence of an evaluation unit within the Ministry of Education reflects of all three of the reasons discussed above.

ADVANCED CURRICULUM CONTENT IN RELATION TO STUDENTS' LEVEL COMPREHENSION

Background

When designing a curriculum, planners need to take into consideration certain pertinent issues, including the environment, culture, resources, manpower, children's ages and background, and, more importantly, the systematic organization and presentation of course content and the various concepts involved. These considerations enable planners to match course content with children's level of comprehension to achieve a useful and workable curriculum. In other words, the planning should focus on the child's developmental stages and the ability to comprehend certain concepts, not on utopian educational goals that reflect political interests. In addition, the technical jargon used in the design must be explicated to facilitate the classroom teacher's understanding and rendering of the material (Gross et al., 1971). This simply means that planners must design the curriculum with both teacher and student in mind if they are to ensure an operative, productive program.

Both teachers and CRDD officials interviewed by the researcher admitted that the content of the JSS courses was generally "too advanced" for the students' level of understanding. A JSS headmaster[19] revealed that, because students lacked previous knowledge of basic concepts in various subject areas such as science, teachers frequently had to spend more than half the lesson time teaching those concepts before returning to the scheduled topic for the day. As a consequence, the main topics, as outlined in the CRDD's syllabus were often never taught.

For example, in a JSS 1 economics class observed by the researcher, the teacher had to spend thirty of the thirty-five minutes allocated for that lesson explaining the concepts of "supply" and "demand". He was supposed to be teaching an applied lesson on "Buying and Selling on the Market" that day. But since his students did not have a clear grasp of the prerequisite concepts, he was unable to teach the actual lesson on that day. After class, the teacher explained to the researcher that "almost" all the teachers on the staff experience the same problem. The universality of this experience was confirmed in another school 166 miles away. The researcher again observed the same problem and heard similar comments from the teacher. The extent to which this situation prevailed, suggests that the JSS course content was "too high" (advanced), particularly for the JSS 1 students. The problem posed by the advanced content of the course was amplified by the number of subjects offered - 13 in total. Since 7 of these were highly academic, the problem was exacerbated for teachers and students alike.

Another difficulty which was uncovered by the researcher pertained to the teaching of the French Language. The teachers involved who were interviewed complained that only a small number of French teachers were available in the Junior Secondary School system. Yet the few who were available had no syllabus to help guide them in their classes. One teacher[21] admitted that the absence of a CRDD syllabus for the French course caused her concern. Since she could only teach what she "felt" was appropriate, her concern was that she might not be teaching the information which would be required by the students for the final year French examination. (The teacher in question was preparing about 30 students to sit for the June, 1990 JSS 3 Final year French Examination.)

Regarding these issues, the CRDD officials admitted there "could" be some problems because the curriculum was "new" and because there were perhaps "too many" courses for the students at this level of education. But they asserted that there was a need to create a "relevant" and "high standard" of education to produce "more qualified" graduates for the country; hence, the rigour of the JSS course content. In terms of the number of courses, the CRDD hinted that "plans" were in the offing to review them in the "near future" for possible reductions or modifications.

The problem of comprehension among the JSS students was further exacerbated by the Ministry of Education policy requiring the use of Ghanaian languages as the medium of instruction in the first three years of the basic education program. The policy was intended to ensure that children "maintained" their cultural (Ghanaian) roots through the use of local languages. In addition, it was argued that the use of local languages at this level would help the children "better comprehend" various concepts used in the different courses, and this would contribute to their subsequent understanding of JSS course content later in their basic education program.

However, the JSS teachers interviewed on this issue felt that this policy greatly contributed to the problem of children not "understanding" the content of what was later being taught at the JSS level. An Assistant JSS headmistress[22] explained that, because English was the second language of the students, its use as the medium of instruction for only three years instead of six years at the primary school level made it "more difficult" for the students to use, read and understand English. She revealed that a large number of the JSS 3 (final year) students (21 out of 48 students) were unable to read even "a sentence" from the JSS English Reader. This was also observed by the researcher at the school. As the teacher pointed out, the lack of adequate English comprehension was one of the main causes of frustration among the teachers with regard to implementing the curriculum.

The Assistant Headmistress[22] further insisted that the primary school graduates of private (independent) schools had "very little difficulty" understanding and using the English language. She revealed that the private schools had ignored the MOE policy and used English for instruction from Kindergarten to primary six. According to her, these private school graduates consequently had a "greater advantage" than those JSS students who had gone through the public primary schools, in terms of passing the final examinations and proceeding to the Senior Secondary level.

Observations

The problem of student comprehension of JSS course content would seem to indicate that the CRDD ignored a fundamental issue when they designed the curriculum. Under the former system, the middle school program offered a systematic and logical transition, in knowledge and understanding, between primary and post-primary education (including teacher training and secondary school). The new structure had phased out the middle school by "joining" the six-year primary course to the first three years of the secondary school program, thus creating a "knowledge gap" between the two levels. The educational authorities thus failed to restructure the primary school program such that it would articulate more closely with the JSS courses.

A significant feature of all educational innovations has been that changes in the curriculum at any level in the system directly affect the entire educational structure, including content, methods, and even administration. Introduction of the JSS curriculum, therefore, required a restructuring of primary education since graduates from this level must move up to the JSS level. It also implied a need to inservice primary school teachers in the methods required for teaching the new courses so that they could help "bridge" the gap between the current primary and the new Junior Secondary School programs.

The problem of students having difficulty "understanding" the material at the JSS level thus has its roots in the country's primary school education system. A contributing factor is the low standard of teaching at the primary level which is mainly due to a lack of qualified teachers (see Table 13) and poor physical facilities. Most teachers at this level of education are basic education graduates whose academic knowledge and teaching methods are quite limited. They are, therefore, limited in their ability to help in the development of higher cognitive skills among primary students.

In an attempt to increase access for all eligible children to the primary level of education, about 80% of both urban and rural primary schools operated two daily sessions - morning and afternoon. This meant that, the required courses were being

Table 13
Trained and Untrained Primary School Teachers In Selected Years

Year	Total Number of Teachers	%	Trained	%	Untrained	%
1965	40,234	100	14,973	37	25,261	63
1969	47,878	100	22,502	47	25,375	53
1970	47,058	100	27,399	58	19,659	42
1971	46,960	100	30,350	65	16,610	35
1972	48,107	100	33,902	70	14,205	30
1980	47,921	100	26,565	55	21,356	45
1982	48,146	100	27,290	57	20,856	43
1987	66,147	100	42,356	64	23,791	36

Source: Ministry of Education (1990), Accra; George (1974), Education in Ghana; World Bank (1984), Ghana policies and program for adjustment. (See also UNESCO [1990], Statistical Yearbook.)

crammed into a half day of instruction, which presented a further obstacle to developing an understanding of the content among the students.

While the government decree enforcing the use of local languages as the medium of instruction from primary one to primary three may be a noble idea, it produced another problem since most lower primary textbooks are written in English. Teachers therefore had to read in English and explain what was read to the children in the local language. The same procedure was adopted at the JSS level to help the students understand the materials in the books. This not only made the teachers' work more time-consuming and strenuous (not to mention frustrating), but underscored the fact English was simply not being taught to the level needed to attain the "understanding" which would be required of higher education.

Conclusion

It is evident, then, that the lack of buildings, dearth of qualified JSS teachers, increased workload of teachers, language and comprehension problems, misallocated course times, and the overall plight of the JSS headmasters ensured the production of ill-equipped JSS graduates. Despite the optimism displayed by the CRDD, GES, and Ministry of Education officials concerning the "relevance" and "comprehensiveness" of the JSS courses, the practical implementation of the curriculum in the schools faced serious if not insurmountable problems.

UNEQUAL JSS COURSE TIME ALLOCATION

An examination of the JSS Timetable (Figure 4) also revealed other discrepancies and perplexities regarding course time allocation in the implementation of the curriculum (Table 14). Each period within the JSS Timetable consisted of 35 minutes. This amount of time in itself was too short to allow for adequate instruction after the students had "settled in". This was even more true in the case of vocational courses.

In general, one lesson in the area of practical or vocational courses required double periods of time to allow for preparation of materials, teaching, practice, and clean-up. The JSS timetable indicates that nearly half of the double periods were allocated to the academic courses, such as social studies and science. English and math are needed in higher education. Since this level of education is dominated by the elite minority, it is little wonder that these two courses received the greatest amount of time allotment in the JSS timetable. On the other hand, life skills and vocational studies (the focus of the JSS program) not only received a mere 35 minutes twice a week, but were forced to share the same two periods! In addition, the abrupt switch from vocational to life skills within the same 35 minute period, as indicated on the timetable, created confusion and did not allow for adequate preparation on the part of students and teachers alike.

Perhaps the most outstanding discrepancy is apparent in the

Table 14
JSS Course Time Allocation

Subject	Periods per Week	Amount of Time per Week (in minutes)
English	5	175
Physical Education	2	70
French	2	70
Social Studies	3 (1 double)	105
Vocational Studies	2 (broken up)	70 (35 min. ea.)
Life Skills	2 (broken up)	70 (35 min. ea.)
Agricultural Science	3 (1 double)	105
Ghanaian Languages	3	105
Technical Skills	4 (2 double)	140
Technical Drawing	2 (1 double)	70
Mathematics	5 (1 double)	175
General Science	4 (2 double)	140
Cultural Studies	3 (1 double)	105

agricultural program. Though this program was to focus on the development of basic rural (agricultural) skills, an agricultural unit had not been created in the CRDD to coordinate this component of the JSS program. Moreover, agriculture had been allocated only three periods per week, with just one double period. This "oversight" reflects the low social esteem accorded to vocational education by not only the general public, but also the policymakers and curriculum designers themselves. How could they hope to promote the idea of agriculture being an "equally lucrative" job when it was receiving such little attention in the implementation of the curriculum?

TEACHER SHORTAGE AND INCREASED WORKLOADS

Background

According to CRDD officials, even though the new curriculum offered diverse academic and vocational courses, not all the courses, especially the vocational ones, had qualified teachers. A senior GES official[6] observed that this problem was particularly "bad" in the rural Junior Secondary Schools where "several" of these schools had "no teachers at all". But the central message of his response was that there was a shortage especially of vocational teachers. This was an important missing element in a program for which practical courses constituted the main difference between the former and the new curriculum.

Table 15 indicates the number of JSS teachers in 1990. The table suggests that academic courses received more attention in e"

Table 15
Total Number of JSS Teachers
May, 1990

Type of Teacher	Total Number
General (Academic)	29,000
Vocational	5,325
TOTAL	34,325

Source: Ghana Education Service, Accra, Ghana.

terms of staffing than vocational courses. A JSS headmaster[19] noted that the lack of vocational teachers made it "impossiblfor the schools to "fully implement" the vocational component of the curriculum. Adding to this observation, a vocational teacher[20] remarked that, even where vocational teachers were available, there were no workshops, work benches or materials provided for them to teach their courses. He disclosed that teachers were "forced" to concentrate on teaching the "theory" of vocational courses rather than the actual practice of the skills. This approach, he warned, could not possibly produce skilled graduates who would contribute to revolutionizing the socio-economic structure of the country.

Another significant statistic provided by a GES official[6] was that 50% of the total number of JSS teachers included in Table 15 were untrained. These teachers were secondary school graduates with either 'O' or 'A' level qualifications rather than post-secondary teacher's certificate.

A further problem revealed by this official was that only 25% of the total number of JSS teachers were employed in rural schools. The main reason for this rural-urban imbalance in the distribution of teachers (particularly trained teachers), was that teachers, like school graduates, prefer to live and work in the urban centers to escape the deprivation and economic destitution of the rural areas. Many were so desperate to avoid teaching in rural schools that they provided the educational authorities with all kinds of excuses, such as marital and health problems, to show why they should not be posted to a rural school. In an attempt to be "humane", the authorities frequently accepted such excuses and acquiesced to the teachers' requests. Thus, the rural Junior Secondary Schools suffered an even far greater shortage of teachers than the urban schools. The general dearth of teachers and the unequal distribution of those who were in the system had resulted in a tremendous increase in teacher workloads, particularly in rural schools. In an attempt to remedy this situation, the GES tried to staff as many urban schools as possible with at least five teachers, but without consideration as to whether any of them were vocationally trained. One school that was visited by the researcher in Accra assigned instructional responsibilities in the following manner:

1st Teacher: Cultural Studies, Social Studies, Mathematics, English and Physical Education (P.E.)
2nd Teacher: English, Science, Technical Skills, and P.E.
3rd Teacher: General Science, Agricultural Science, Social Studies and P.E.
4th Teacher (Headmaster): Life Skills, Vocational Skills, Cultural Studies and P.E.
5th Teacher: Mathematics, General Science, Technical Drawing and P.E.

The course assignments for the five teachers indicates clearly the heavy teacher workload. The result was that teachers were unable to give full attention to each course in terms of instruction, assigning and marking assignments, and recordkeeping for the approximately 300 students they taught. Again, it should be recalled that half the JSS teachers were untrained and thus not usually capable of effectively teaching the various courses assigned to them.

Added to the burden of tremendous workloads for the teachers was the demanding National JSS Timetable (Figure 4). The timetable shows classes beginning at 7:15 A.M. and finishing at 6:00 P.M. each day from Monday to Friday, running two daily sessions--morning and afternoon. (This means each class was divided into sections A and B. Section A students attended classes from 7:00 A.M. to 1:10 P.M.; Section B students began classes in the afternoon.) The same teachers and classrooms were used for both sessions with no rest in between. There was even an overlap of five minutes, with morning classes ending at 1:10 P.M. and afternoon classes commencing at 1:05 P.M. As observed by the researcher in one school, this caused a great deal of confusion during that time. According to the timetable each teacher spent eleven hours at school everyday, a total of fifty-five hours every week. This, of course, excluded the many hours spent marking assignments at home. The headmaster[24] interviewed at an Accra Junior Secondary school stated that these long hours, in addition to teaching so many courses, "stretched" the teachers to their limit, causing them to perform below their capabilities. This predicament was exacerbated by the staggering teacher-student ratio of 1:50 at his school. One teacher[14] at the school told the researcher that he could do "very little" (teaching) in the afternoon session because he always felt "too exhausted" by 3:00 P.M. The number of students per teacher was often much greater, especially in rural areas.

This heavy workload was also carried by headmasters in the Junior Secondary Schools. It would appear that the CRDD officials did not consider the strain on these staff of both administrative and teaching duties. The headmasters who were interviewed on this issue claimed they felt "ineffective" and "incompetent" to handle both types of duties, not only from the perspective of time, but also due to the fact that they possessed very little or no knowledge and experience regarding school administration at the secondary level. Most were recent graduates from the training colleges and had received just a two week administration course organized for them by MOE and GES officials in 1987. The problem was exacerbated by the fact that the headmasters themselves also had to teach about five different courses, give and mark class assignments for about 300 students, complete numerous class assessment forms every week, plus fulfill their administrative duties. In addition, they were expected to attend the irregularly scheduled community meetings and visit the district JSS center almost every two weeks.

MORNING SESSION

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:15-7:30	----- REGISTRATION -----				
7:30-8:05	ENGLISH	AGRI. SCIENCE	ENGLISH	FRENCH	VOC./LIFE SKILLS
8:05-8:40	ENGLISH	AGRI. SCIENCE	MATH	MATH	VOC./LIFE SKILLS
8:40-9:15	P. E.	GHANA LANG.	P. E.	AGRI. SCIENCE	ENGLISH
9:15-9:45	----- BREAK -----				
9:45-10:05	FRENCH	TECH. SKILLS	CULTURAL STUDIES	SOCIAL STUDIES	MATH
10:05-10:40	SOCIAL STUDIES	TECH. SKILLS	CULTURAL STUDIES	GENERAL SCIENCE	CULTURAL STUDIES
10:40-11:15	SOCIAL STUDIES	ENGLISH	GHANA LANG.	GENERAL SCIENCE	GHANA LANG.
11:15-12:00	----- BREAK -----				
12:00-12:35	VOC./LIFE SKILLS	MATH	GENERAL SCIENCE	TECH. DRAWING	TECH. SKILLS
12:35-1:10	VOC./LIFE SKILLS	MATH	GENERAL SCIENCE	TECH. DRAWING	TECH. SKILLS

AFTERNOON SESSION

1:05-6:00	SAME SCHEDULE AS MORNING TIMETABLE

Figure 4. National JSS Timetable.

Source: Ghana Education Service, Basic Education Section, Accra, 1990.

Observations

The shortage of teachers posed a threat to the implementationof the JSS curriculum in the schools. It has been emphasized repeatedly by most educational researchers, including Fullan (1982); Gross, et al (1971); Hurst (1983); and Havelock and Huberman (1977), that the classroom implementor (the teacher) is the cornerstone of any successful innovation. A program could have a flawless implementation design, adequate materials and funding; yet, without sufficient numbers of qualified teachers to actually implement the "flawless" design in the classroom setting, the innovation is bound to fail.

As noted before, educational authorities and policymakers in Ghana (as in other LDCs) seemed to be more interested in expounding the "sound" goals and outcomes of new educational programs to the people than producing an adequate number of teachers to implement such programs. A teacher shortage therefore has continued to be a predominant constraint on educational innovations, particularly vocational programs, in these societies (Foster, 1966; Bacchus, 1986; Lauglo, 1985; 1990; Lillis & Hogan, 1983).

Pertaining to vocational education, competent teachers with relevant experience from industry or craft have always been difficult to recruit, train, and keep (Lauglo, 1990). Throughout the LDCs, relevant industrial experience was a declared preferred background of those who entered vocational teacher training; yet, in the same countries it has been rarely the case that vocational teachers have such a background (Lauglo, 1990). Students who entered vocational teacher colleges in Ghana to train as teachers for the Junior Secondary Schools had to possess a minimum of four 'O' Level credits, including English and math. However, they were not required to have passes in any vocational subjects. Nor was such vocational experience demanded of them after graduation before entering the teaching field. Surprisingly, those who had on-the-job vocational experience were not accepted to be trained as teachers, regardless of their expertise, because they did not possess the academic requirements, i.e. the 'O' level minimum.

Pay (salary) and other incentives have been crucial for attracting and keeping vocational teachers. Unlike their more highly paid (normally) academic colleagues, competent vocational teachers tend to have better paid alternative employment possibilities in their trade (Lauglo, 1990). For instance, a qualified carpenter would receive higher pay in a private carpentry shop than in teaching carpentry in school. The annual salary of a qualified (post-secondary) JSS teacher, as of May 1990, was ¢217,075, or about ¢18,000 a month, while the experienced vocational teacher (e.g. a technical drawing instructor) was receiving ¢180,437 on about ¢15,000 per month (GES, 1990). Thus, it would be economically better for the vocational teacher to practise his/her trade in a firm where, for example, the production of one building plan alone could earn him between ¢60,000 to ¢70,000.

The argument put forward by the Ministry of Education concerning this salary differential was that vocational teachers had received no formal teacher training education. The MOE stated that it wanted only trained teachers to staff the Junior Secondary Schools. Vocational teachers actually recruited by the MOE were dismissed after two years for the same reason.

Those vocational teachers who continued in the education service were not only paid poorly, but were also held in low esteem. The situation was therefore a contradictory one. Vocational teachers were badly needed, yet the MOE did not seem to be pursuing a policy to grapple effectively with this problem. The Ministry's attitude seemed to imply that the educational authorities themselves accorded low credibility toward vocational education, which was supposedly the backbone of the JSS curriculum.

This low credibility was perhaps further exemplified in the MOE's policy of virtually demanding local craftsmen to volunteer their expertise and time to teach the JSS vocational courses. No consideration was given to the harsh economic conditions currently affecting all Ghanaians, particularly those in the rural areas. As a result, the local craftsmen had refused to teach their skills to the students because they were not being offered any salaries. Therefore, once more it was the vocational courses which suffered, seriously undermining the JSS program goal of skills acquisition for productive graduates and employment generation.

TEACHER EDUCATION AND THE JSS PROGRAM

According to MOE policy, contained in its educational document[5], teachers formed "the key factor" in the implementation of the program. Hence, the success of the exercise greatly depended upon the "competence" and "committment" of teachers (MOE, 1974). The policy declared that, in order to ensure that teaching at the basic education level (including the JSS) did not "degenerate into rote learning and memorization of facts," teachers should concentrate more on imparting both knowledge and skills to promote full development of both teacher and student. To this end, the MOE emphasized that the Junior Secondary Schools required "effective" teachers whose "professional training" produced the type of teaching that would encourage "inquiry, creativity, and development of manual skills" among the students (MOE, 1974).

In line with the above policy, the senior officials of the National Teacher Training Council (NTTC) interviewed declared that the current teacher training curriculum was diversified to produce the type of teachers required for the Junior Secondary Schools. A senior NTTC official[27] stated the program lasted three years, during which time student-teachers studied courses which they would eventually teach in the Junior Secondary Schools. He disclosed that, under the new education reform program, only teacher colleges were commissioned to train teachers for the basic education system. He further revealed that teacher colleges would admit only those students who had completed the Senior Secondary course to train as JSS teachers beginning in 1993.

According to the same official, the new admission policy required students entering the teacher colleges to already have requisite academic and practical skills acquired from the Senior Secondary course, a stage considered by the NTTC as being above the level of the students' future JSS teaching career (Ibid.). In other words, the higher knowledge and skills provided by the Senior Secondary course would help the teachers to better understand, and so effectively teach, the JSS courses.

The NTTC's policy document[28] indicated that thirty-eight teacher colleges existed throughout the country, having an enrollment of 12,586 students. The colleges were grouped into two main streams (see Table 16).

During the 3-year course, as reported by the senior NTTC official[27], each student studied all the courses in his/her group and chose one as a special field of study (major). All students also studied the core courses (TTC, 1987).

According to the student-teachers who were interviewed, however, the NTTC officials responsible for selecting the students for each group, failed to consider the educational background of the students. A student-teacher[30] confirmed this when he remarked that he (like many others) felt "frustrated" and "incapable" because he was directed to major in science or technical drawing

Table 16
Teacher Education College Groups

Group I	Group II
Mathematics	Social Studies
Agricultural Science	Vocational Skills
Science	Life Skills
Technical Skills	English Literature
Technical Drawing & Physical Education	

The two groups also have common core courses:

- Education
- Physical Education
- Science
- Ghanaian Languages
- Cultural Studies
- English Language
- Basic Mathematics
- Agricultural Science

Source: NTTC (1987), Accra.

even though his academic background had been in the arts. The student-teachers, therefore, were very critical of the group process of selecting students to specialize in specified areas. Their main concern was that, since they lacked any previous knowledge in certain subjects (e.g. technical drawing), they might not be able to teach them effectively at the Junior Secondary level.

With regard to teacher output by the training colleges, the records of the NTTC showed that, between 1988 and 1990, a total of 4,525 teachers graduated to teach in the Junior Secondary Schools (see Table 17). Yet, according to the NTTC document[28], a total of 20,000 teachers had been projected to graduate from the teacher colleges by the year 2000. In addition, of the 38 teacher colleges, ten had been designated to produce a total of 4,000 vocational teachers by 1993 (NTTC, 1987).

In terms of examinations, the NTTC document (NTTC, 1987) showed that the teacher colleges had adopted the JSS's "internal and external" assessment policy. The internal component once again constituted 40% of the total final grade, while the external component, administered by the Institute of Education, Cape Coast University, formed 60% of the total final grade (NTTC, 1987).

Problems

Through interviews with the various NTTC officials, two teacher college principals, and twenty student-teachers, the following problems were identified in connection with teacher

Table 17
Teacher College Output: 1988-1990

Year	No. of Teachers Graduated
1988	1,086
1989	1,445
1990	1,994

Source: NTTC (1987), Accra.

development and supply for the Junior Secondary Schools:

(a) Inadequate number of teacher training institutions.

(b) Lack of qualified teacher-trainers, particularly vocational teachers.

(c) Inadequate supply of vocational equipment, workshops.

(d) Poor academic and vocational background of students.

(e) Disproportional percentage allocations for the final examinations.

Inadequate Number of Teacher Training Institutions

The Senior NTTC officials interviewed by the researcher were confident that the total number of teacher colleges in the country responsible for producing teachers for the Junior Secondary Schools was adequate. One senior NTTC official[27] added that the thirty-eight colleges had "adequate facilities" to admit sufficient numbers of students to train as JSS teachers.

Conversely, two teacher college principals interviewed on this issue strongly argued that the number of colleges was "very inadequate" in terms of producing enough teachers for the expanding Junior Secondary Schools. According to the second principal[29b], the total number of colleges was not 38, as stated in the NTTC's records, but "thirty-three" with "only one" college (Mampong Handicraft Teacher Training College) set aside to train vocational teachers (NTTC, 1990). This implied that the problem of inadequate supply of vocational teachers at the JSS level was likely to increase in the years ahead, since only one college trained such teachers.

Lack of Qualified Teacher-trainers, Particularly Vocational Teachers

These principals also stated that there was a lack of qualified teacher-trainers. In 1990, the total number of teacher-trainers in the colleges was 1,342, out of which 35% were unqualified (NTTC, 1990). In addition, there were only 148 vocational teacher-trainers in the colleges (NTTC, 1990), a "very inadequate" number indeed. According to the first principal[29a], the unqualified personnel included science, social studies, cultural studies, and vocational teachers. He explained that qualified technical/vocational personnel preferred employment outside teaching as the pay (salary) and "fringe benefits" offered by private firms were more lucrative than the opportunities in the education sector. Those who chose teaching, therefore, were usually "inferior" in quality (Ibid.). The lack of an adequate number of qualified vocational teacher-trainers in the colleges was an indication that the student-teachers were more likely to concentrate on studying academic courses of the teacher training curriculum, which also implied the production of ill-equipped JSS teachers for ill-equipped Junior Secondary Schools. In this situation, the vocational courses at the JSS level were certain to receive less emphasis in the years ahead.

Inadequate Supply of Vocational Equipment, Workshops

As with the junior secondary schools, the shortage of vocational teachers in the teacher colleges was accompanied by an inadequate supply of vocational equipment and materials, and workshops for practical training of the student-teachers. According to the second principal[29b], the teacher colleges received the same type and amount of equipment as the Junior Secondary Schools, but again the lack of work-benches or workshops prevented his students from using what equipment was received. He disclosed that vocational student-teachers were being prepared basically in the "theory" aspect of the vocational courses, and charged that even the special vocational teacher college at Mampong (Ashanti) faced the same problems of shortages of teachers, equipment, and workshop facilities.

Therefore, it was evident that the equipment and materials supply problems which plagued the Junior Secondary Schools, extended to the teacher colleges. It was an indication that the practical realization of the JSS goal of skills acquisition was further threatened.

Poor Academic and Vocational Background of Students

After graduation from secondary school, as explained by the second principal[29b], the best qualified graduates proceeded to the Sixth Form, after which many entered university. Others entered professional institutions, including agricultural and forestry colleges, where students in training received a "more attractive" monthly salary than the ¢1,000 allowance given to student-teachers each month. According to him, Kwadaso Agricultural College students were put on a salary scale (the minimum being ¢5,000 per month in the first year of the program); hence, the best graduates preferred such colleges to teacher training. In other words, the graduates admitted into the teacher training course were of a "mediocre" quality in terms of academic achievement. He also disclosed that 50% of those admitted did not possess the required entry qualification of 4 credits at "O" level, including English and Math. Such students were given remedial classes in their first year to help them "better" their "O" level requirements (Ibid.).

This situation appeared to add strength to the possibility of a drop in teacher college enrollments after 1993, since most Senior Secondary graduates seemed to prefer entering the universities, other professional schools, or more economically rewarding employment than teaching.

Additionally, as Lauglo (1990) observed, historically student-teachers with vocational or technical backgrounds have been scarce in the LDCs, including Ghana. This is because the NTTC officials insisted on admitting only those students with academic qualifications into the training colleges, overlooking the fact that the new curriculum required the training of vocational teacher graduates as well. The vocational teacher training colleges should have permitted entry to technical school graduates for training as teachers.

Unequal Percentage Allocations for the Final Examinations

Final examination of the teacher education course also came in for criticism. Two college principals insinuated that the

NTTC's percentage allocation policy had, since its inception in 1987, caused a "considerable drop" in the pass rate of the final year students in all the training colleges. According to the first principal[29a], before 1987 the overall pass rate in the colleges was between 90-98%. However, since 1987, this had dropped to between 40-50%. As an example, he noted that, out of the ninety-nine candidates presented for the 1989 final examinations by a training college, only 10% passed (Ibid.). The rest were "deferred" in more than three subjects, which meant they were indirect failures and therefore could not be considered "qualified" teachers by the Ministry of Education and the NTTC (NTTC, 1990.).

A senior NTTC official[27] explained that such graduates were given "five chances" to pass the examinations (i.e. 5 years), during which time they were permitted to teach in the schools. However, as clarified by a JSS teacher[25], until they passed the deferred subjects, such teachers received only one-third of the normal monthly salary--¢6,000 each month instead of ¢18,000. He added that the frustration and uncertainty caused by this policy had compelled many teachers to seek employment with the Social Security and National Insurance Trust (SSNIT), where they received even higher salaries than a "qualified" teacher (¢22,000 with several other incentives, including a car allowance).

According to the principals, in its "zeal" to staff the Junior Secondary Schools with only "qualified" teachers, the

Institute of Education, University of Cape Coast, had "tightened" its marking policy, with the result being that many candidates were deferred each year. As in the case of JSS teachers, the two principals charged that the University officials had "no idea" of the diverse problems which affected teaching and learning in the teacher's colleges. Hence, they did not take such conditions into consideration when deciding on the pass mark. They suggested the NTTC either abolished the new percentage allocation policy, or permitted the internal component to carry 60% of the final grade instead of 40% (NTTC, 1990).

While it was necessary for the NTTC to establish "higher" standards with regard to graduating teachers, it was equally important for the authorities concerned to realize that every effort should be made to retain the few trained teachers who were in the schools. It seems a waste of funds to train students for three years only to see them leave and sell their expertise in other employment.

Conclusion

Teacher development and supply should be seen as the backbone of any implementation process at the school level and, therefore, in need of effective organization and supervision. The situation in the teacher colleges suggested that both the MOE and the NTTC officials had not given adequate attention to this fact in the implementation of the JSS program in the schools. Again, the increasing number of Junior Secondary Schools and rising enrollment indicated that more teachers (particularly vocational teachers) were needed if the actual classroom implementation of the program were to succeed.

JSS EXAMINATION AND SENIOR SECONDARY SCHOOL SELECTION POLICIES

JSS EXAMINATIONS

The Ministry of Education's policy[1], with reference to the final year JSS 3 examinations, stated that the "progress of the basic education system" (which included primary and JSS programs) was to be measured by both "internal and external" examinations. In other words, the final year examinations at the completion of the basic education course (JSS 3) consisted of internal and external assessments.

According to this policy, the internal classroom component was to consist of a system of "continuous assessment" administered by each teacher during the school year for students in their class. This was to be done from JSS 1 through JSS 3 (Table 18). This component of the final year examinations constituted 40% of the total grade required by the student to qualify him/her for the Senior Secondary Level. The external component was to be conducted by the West African Examinations Council (WAEC), an independent examining body for the Anglo-West African States. This part of the examinations constituted 50% of the total grade needed to qualify a student to advance to the Senior Secondary level (Ibid.). (A copy of the 1990 JSS external examinations for Life Skills and

Table 18

Continuous Assessment at Basic Education Level
Term Assessment Plan

SUBJECT ______________________ YEAR ______________

FORM ______________________ TERM ______________

TEACHER ______________________ FORM AVERAGE ______________
(Calculated from Overall to

NAME OF STUDENT	CLASS ASSIGNMENTS/ EXERCISE	CLASS TESTS	PROJECT HOMEWORK	CLASS TOTAL SCORE	END OF TERM	OVER-ALL

Source: Curriculum Research and Development Division (CRDD), Ministry of Education, Accra, May, 1990.

Calabash Art is provided in the Appendix G).

Problems

Two main problems with the final-year JSS grading were identified through interviews with a number of JSS teachers and headmasters. The first problem concerned the completion of the continuous assessment forms, through which the internal 40% of the final examination grade was determined.

A JSS headmaster[19] protested that the system of completing the forms was "too time-consuming" for the teachers to conduct on a weekly basis. He contended that the forms contained several indicators and teachers had to spend several hours each week completing them. This made the already "unbearable" workload of the teachers even more burdensome (MOE, 1987). In addition, he argued that some of the assessment indicators, including "tolerance", imagination," and "value judgement", were too abstract to be practically evaluated (Table 19). Regarding the assessment criteria, a senior official[17] of the CRDD observed that the system was a "trial one" and therefore would "soon" be reviewed.

The second argument put forth by the JSS teachers was that the ratio used in the final assessment was unfair. A JSS teacher[25] asserted that, since the external element carried the larger percentage (60%) of the overall total grade, it was "very unlikely" most of the public JSS students would qualify for the Senior Secondary level. He posited that the external examiners had

Table 19

Pupil's Weekly Continuous Assessment Card

PUPIL'S NAME ______________ SEX ____ CLASS ____ TERM ____ YEAR ______

SOCIAL STUDIES

DOMAINS	Attributes Assessment	Weekly Scores (Max. of 5 marks each Cognitive Attribute) Rate Grade								Ave. Score/Gr.
Cognitive*	Recall Understanding Application Analyzing Synthesis Evaluation									
Affective	Interest in studies Value judgement Aspiration Sociability Tolerance Cooperation with mates									
Psychomotor	Observation Creativity Imaginative Leadership Any other skills ______________ (specify)									

* Assessment in the cognitive domain will generally take the paper and pencil form of testing and should have items to measure each of the specified areas of cognitive achievement.

Source: Curriculum Research and Development Division (CRDD), Ministry of Education, Accra, May, 1990.

"no knowledge" of the limits and problems faced by these students and how they could affect their performance on the standardized external examination (Ibid.).

A senior MOE official[4], commenting on the percentage distribution policy, assured the researcher that the MOE would "eventually reverse the ratio to read 60:40 in favor of the internal component", though he failed to specify how soon this reversal would take place.

The certificate awarded at the end of JSS 3 was known as the Basic Education Certificate (BECE). According to a GES official[5], the certificate showed the specific courses taken in the examinations, and the grades scored by the student for each course. Each JSS 3 student who took the examinations, regardless of his or her grades, received a JSS certificate, or BECE.

Observations

As of May 1990, however, approximately one month before the examinations commenced, both JSS teachers and the MOE officials concerned appeared uninformed of the nature and content of the external examinations. Again, the MOE officials had still not determined the passing grade in the examinations nor the grade that would qualify a student to advance to the Senior Secondary level. In addition, the examiners who were to mark the JSS scripts had not been identified.

Information received late September 1990 in private conversation with a JSS music teacher testified to the disorganized state of the examinations:

> ...when the Examination Council (WAEC) invited me to mark the JSS examination scripts I expected to mark Music which was now part of Cultural Studies. Instead I was made an Assistant Examiner for Life Skills, or Home Science!!! How could I mark Home Science when I know absolutely nothing about the subject? When I confronted the WAEC representative on this being a possible mistake, he reaffirmed to me that it was not a mistake. In addition, he refused my pleas to allow me to mark the Music scripts (which I later learned were marked by Geography and Mathematics teachers!) I had to mark the Home Science scripts; my only pity was for those poor candidates who had me as their examiner....Again, I just want you to know some of the absurdities prevailing in the so-called new and relevant education system of the country. (Private Conversation).

With regard to the internal assessment of students, it appears that the curriculum designers were unable to translate their expert knowledge into simple, comprehensible terms for a meaningful evaluation to be given by the teachers. The weekly assessment card included too many indicators of success for assessment, most of which called for a subjective opinion or evaluation from the teacher rather than an objective observation, particularly so since each teacher was working with a great number (200-300) of students each week. Furthermore, unless associated with a subject, cognitive attainment or grade records, most of these indicators would be more aptly assessed over a longer period of time than a week, perhaps monthly or once per term.

The teachers, however, did their best to evaluate the students' achievement. Yet after all this had been done, the policy used to determine the distribution of marks (40:60 ratio) put the fate of the student in the hands of the external examiner who, as mentioned earlier, was quite oblivious to the diverse situational implementation problems in the public Junior Secondary Schools, particularly in the rural areas. Through one nationwide examination a student's future was largely decided, with little consideration of the work, attainments, and progress made throughout his/her years in the Junior Secondary School.

SENIOR SECONDARY SCHOOL SELECTION POLICIES

Due to the fact that there are only a limited number of Senior Secondary Schools in Ghana (400 at present), the Ministry of Education's selection policy made provision for only 30% of the 1990 JSS 3 graduates to be selected for this type of further education. A senior MOE official[7] explained that, out of the 196,981 graduates, only 59,094 would be admitted into the Senior Secondary Schools, approximately 148 students per school. The remaining 70% (137,887) would have to "adjust" themselves into the society based on the knowledge and skills acquired from the JSS course. He added an optimistic comment, though, that the number of students permitted to enter the Senior Secondary schools would be increased by 5% commencing in 1991 (Table 20).

Table 20 indicates that 196,000 primary school graduates were projected to enter JSS 1 in 1987. Of this, 10% were expected to drop-out by the end of the course in 1990. Thirty percent

Table 20
Ministry of Education Projection Input-Output in the JSS and Senior Secondary School for External Examination Purposes: 1987-1999

Year	Junior Secondary			Transitional Rate %	Senior Secondary		
	Input (Sept)	Dropout Rate %	Output (June)		Input (Sept)	Dropout Rate %	Output (June)
1987	196,000	10					
1988	200,000	10					
1989	210,000	8					
1990	215,000	8	176,400	30	52,920	2	
1991	225,000	7	180,000	35	63,000	2	
1992	225,000	7	193,200	35	67,620	2	
1993	230,000	5	197,800	40	79,120	2	51,862
1994			204,600	40	81,840	2	61,740
1995			209,250	45	94,162	2	66,260
1996			218,500	50	109,250	2	77,538
1997							80,203
1998							92,288
1999							107,065

Source: Ministry of Education (May, 1990), Accra.

(52,920) of these completing the course would qualify for selection into the Senior Secondary level, leaving 70% of the graduates (123,480) to be assimilated into society and the economy with virtually no opportunity of ever pursuing higher learning. At the Senior Secondary level 2% of the total enrollment of 52,920 were predicted to dropout by the end of the three-year course (1993), with 51,862 Senior Secondary graduates expected to enter either a university, a polytechnic or a teacher college. Table 20 also shows that the transitional, or qualifying, rate from the JSS level rises by 5% per year.

While the MOE relied on its own projected figures, the GES records on actual JSS 1 enrollments from 1987 to 1990 confirm different figures, as indicated by Table 21. This table shows that the following total enrollments were made in JSS 1 between 1987-1990:

1987-1988 = 196,981 enrolled in JSS 1
1988-1989 = 208,980 enrolled in JSS 1
1989-1990 = 213,155 enrolled in JSS 1

According to the GES figures, the MOE's projections were exceeded. For example, the MOE projected 200,000 JSS I enrollments for 1988, while the actual intake was 208,980 students. The implication was that additional resources, equipment, and teachers would be needed in the Junior Secondary Schools to accommodate the extra 9,000 students. This would be true each year, since actual

Table 21
JSS Enrollment by Region: 1987 - 1990

Region	JSS 3 1987-1988 No. of JSS's	 Enrol.	JSS 2 1988-1989 No. of JSS's	 Enrol.	JSS 1 1989-1990 No. of JSS's	 Enrol.	Total No. of JSS's	Total Enrol.
Greater Accra	331	21,417	37	24,060	22	23,632	390	69,109
Eastern	744	32,469	43	34,066	25	36,192	812	102,727
Volta	598	23,017	27	22,826	13	23,723	638	69,566
Central	556	21,546	27	21,334	14	14,204	597	67,084
Western	511	19,826	37	21,672	26	22,605	574	64,103
Ashanti	772	40,434	46	45,610	20	41,409	838	127,453
Brong-Ahafo	519	22,572	36	22,496	15	24,545	570	69,613
Northern	170	7,738	41	9,346	12	8,978	223	26,062
Upper-East	109	4,896	22	4,096	13	4,134	144	13,126
Upper-West	114	3,066	17	3,474	16	3,733	147	10,273
TOTAL	4,424	196,981	333	208,980	176	213,155	4,933	619,116

Source: Ghana Education Service (May 1990) Accra.

enrollment figures were larger than those predicted by the MOE.

In the "Daily Graphic" (Dec. 20, 1990), the Ministry of Education reported that 126,000 JSS 3 students took part in the July 1990 final year examinations, out of which 66% qualified for selection into Senior Secondary Schools. From this report it would appear that 36% of those enrolled in 1987 had dropped out by 1990, nearly four times the percentage projected by the MOE. This suggests that the expressed objective of employing the JSS program to sustain students' interest in remaining in school and completing the basic education course was not being achieved.

The "Daily Graphic"[26] also reported that the MOE had set the minimum qualifying grade as "an aggregate of 36" in each candidate's" best six subjects" (out of thirteen). Each subject was graded 1-9 with a score of 1 being the highest grade, followed in rank by 2, 3, etc. down to 9. The last grade (9) was considered a fail. Thus, an aggregate of 36 would mean the candidate had to have an average score of 5 or below in his top graded six subjects (see Table 22).

An aggregate score of 30 in the best six subjects for this student sample (see Table 22), therefore, would qualify the candidate for selection into the Senior Secondary School, since it fell below the required aggregate of 36. Those whose total score on the best six subjects exceeded 36 would only be considered after priority had been given to students whose aggregate score fell below or was up to 36. Again, the implication would be that

Table 22
Sample of Bece Results Sheet

Candidate No. ____________________ Year ____________

Subject	Grade Scored
English	4
Mathematics	6
Science	7
Social Studies	7
Ghanaian Language	6
Agricultural Science	6
French	7
Physical Education	7
Life Skills	5
Vocational	6
Technical Drawing	8
Technical Skills	6
Cultural Studies	3
TOTAL SUBJECTS RECORDED	13

AGGREGATE OF SIX BEST SUBJECTS

Subject	Grade
English	4
Cutlural Studies	3
Life Skills	5
Mathematics	6
Ghanaian Language	6
Agricultural Science	6
AGGREGATE	30

those with an aggregate score below 36 would be the first selected. Those who obtained an aggregate score of six out of the six best subjects were considered excellent students, and normally were admitted into the top ranking Senior Secondary Schools, which included Achimota and Adisadel Colleges.

The MOE released the figures for the top-rated students of each region for the 1989-90 academic year (see Table 23). The total of 2,264 indicate that 3% of the 83,000 students who qualified for selection received the top aggregate mark in the country. What the figures also suggest is that there were likely regional disparities concerning the allocation of resources, teachers, and/or funding. Those regions which produced greater numbers of top students would either have higher allocations or were capable of being more resourceful than others in acquiring educational supplies for their schools.

The government's decentralization policy on educational provision made the establishment of Junior Secondary Schools the sole responsibility of the districts, with no limit as to the number of schools that could be built. Since basically only the urban areas could afford the financing, resources, and manpower for such expansion and improvement, the students in the poor regions, including the North, Upper East and West regions, did not have an equal opportunity for academic achievement. This situation resulted in fewer graduates from these areas qualifying for admission to the Senior Secondary level. This did not augur well for the attainment of the egalitarian goals of the program.

With respect to selection, the limited facilities and placements in the 400 Senior Secondary Schools had compelled the MOE to select only 63% of those who qualified for Senior Secondary education (West Africa, December, 1990). Therefore, of the 83,000 graduates who qualified for selection, 37% would probably not receive admission into the 400 schools, bringing the total percentage of 1990 JSS 3 graduates "who may have to adjust into the society based upon their acquired skills" (MOE, 1987) to 58%, since 126,000 students took the examination. Unless additional Senior Secondary school places were provided, the number of JSS graduates who would be able to advance would continue to decrease because enrollments at the JSS level have been steadily growing.

Another outcome of this problem has been the establishment of several private Senior Secondary institutions by private businessmen and individuals. These schools charged high fees, between ¢200,000-¢300,000 per student per year. Since most parents, especially in rural areas, could not afford such high fees, it would again be the rich and those having "connections" who would have the advantage of obtaining higher education.

All these conditions caused many educators to speculate that the JSS program had been introduced as part of basic education in Ghana to reduce enrollments at the higher education levels. Controlled enrollment at the Senior Secondary level meant a drastic enrollment reduction in all post-senior secondary institutions. Under the former system, the middle school graduates could enter either a teacher training college, a secondary school, or a technical institution. But with the new system, the JSS graduate needed a Senior Secondary qualification before he or she was eligible to enter a training college or technical institution, much less attend a university. In such a situation, it was unlikely that graduates with vocational qualifications would stand much chance of gaining access to higher education. This would therefore inspire the majority of the JSS students to pursue academic rather than vocational education.

The Ministry of Education countered suggestions that the new education structure was designed to prevent large enrollments at the higher education level, and was aimed rather at producing "farmers, carpenters, seamstresses and masons" (West Africa, December, 1990), but this remained a moot issue.

Conclusion

Because teacher shortages (particularly of vocational teachers) and inadequate supplies of equipment and resources have been typical of conditions in the Junior Secondary Schools, it would not be unreasonable to predict the same conditions would be encountered at the Senior Secondary level. Here again, the likelihood of introducing "hands on" practical courses would be doubtful, causing interest in these vocational courses to wane. The result would be that more Senior Secondary graduates would prefer to enter university, implying that fewer graduates would

Table 23
Aggregate Six Out of Six Best Subjects - By Region

Region	Total No. of Students
Greater Accra	886
Eastern	367
Ashanti	259
Volta	214
Brong Ahafo	134
Western	128
Central	119
Northern	107
Upper West	26
Upper East	24
TOTAL	2,264

Source: Daily Graphic, 20 (Dec. 1990).

decide to enter teacher training or a polytechnic. This would further aggravate the already severe vocational teacher shortage in the Junior Secondary Schools and intensify the disorganization and instability of the entire JSS program. It was also very likely to increase unemployment among the educated since the graduates would basically possess academic rather than vocational skills to compete for limited job openings.

CHAPTER IX

EQUIPMENT, RESOURCES SUPPLY, DISTRIBUTION SYSTEM, AND FINANCING

Of vital importance to any educational program, especially a vocational program, is the availability and effective distribution of the necessary equipment and resources. A sufficient supply of equipment and materials is especially vital for vocational courses to enhance practical teaching and learning in the schools. A shortage of such supplies would mean students would not be able to use the information being learned, resulting in the production of ill-equipped pre-vocational graduates. It would also contribute to the demise of the program since there would be little option other than a return to a curriculum focused on academic courses.

Despite the fact that this is widely recognized, inadequate supply of equipment has been one of the major contributing factors to the failure of vocational programs in the LDCs, including Ghana (Foster, 1966; Lauglo, 1985; 1990; Lillis and Hogan, 1983; Bacchus, 1986). And the investigation carried out for this particular study of the JSS program indicates that it continues to plague vocationalization efforts.

Equipment Supplies

During interviews with senior Ministry of Education officials, it was reported that each JSS was supplied with two sets of boxes containing the equipment required for the vocational courses. The following list of equipment was subsequently noted by the researcher to be present in at least two urban schools (see

Table 24). While, each JSS was expected to receive this number of allocated equipment, in a number of rural schools the boxes contained nothing more than one hammer, one chisel, one saw, one shovel, one rake, one screwdriver, and one handfork. It could be surmised that, although each school obtained two sets of boxes of tools, some schools (most likely more of the urban schools) seemed to have received more tools than others.

According to a senior official[23] of the Logistics Unit of the MOE, the cost of the two boxes of equipment for each school was approximately US$200 (plus shipping). This meant that the total cost of importing the equipment for the 4,933 schools would have been nearly one million dollars (U.S.), an amount most unlikely to be found in the education budget, particularly for the exclusive purchase of tools. Thus it could be reasonably assumed there was both an insufficient and an unequal supply of tools across the Junior Secondary Schools.

A GES official[6] explained that, due to the limited amount of vocational equipment relative to the large number of students who were expected to use them, the GES had decided that the schools should merely "expose" students to the "handling" of such equipment. This policy was later observed in a Junior Secondary School by the researcher during a carpentry class. On this occasion, an attempt was made to allow each of the 46 students in the class to "handle" the saw for approximately one minute while the teacher "exposed" them to the correct way of holding this

Table 24
Allocated Vocational Equipment for Each JSS

	Quantity
TECHNICAL TOOLS	
Saw	2
Chisel	2
Hammer	1
Clamps	1
Bench Plane	1
Sharpening Stone	1
METAL WORK	
Hacksaw	2
Squares	2
Files	2
Screwdrivers	2
BLOCKWORK (MASONRY)	
Bolster	1
Spirit Level (for measuring)	1
Brick Trowel	1
TECHNICAL DRAWING	
45° & 60° Set Squares	1 ea.
Compass	2
Protractor	1
COOKERY	
Coalpot	1
Aluminum Saucepan	2
FARMING	
Cutlass	2
Hoe	2
Shovel	2
Rake	1
Handfork	1
CLOTHING & TEXTILE (DRESSMAKING)	
Yards of Gray Baft	6

Source: GES (1990), Accra.

tool. At the end of the 35 minute carpentry class, only 22 of the 46 students had the opportunity to "handle" the saw. This method of hands-on "teaching" with the limited vocational equipment was used in all the practical subjects in the JSS curriculum.

Distribution System

The distribution of equipment and resources, as explained by the Ministry officials, was organized in the following manner. The equipment had to be imported from the USA and Canada. When the equipment arrived in the country it was stored in warehouses at the Tema Harbor (near the capital, Accra). From the harbor, the various allocations were transported by State trucks directly to the districts for storage at the JSS depots. The headmasters of the Junior Secondary Schools in the district were then supposed to be informed by the District JSS Coordinator that their supply had arrived and they should collect their individual school allocations. Each headmaster at this point became "accountable" for the supplies received and for their safekeeping in the school. According to a senior MOE official[3], the distribution system was coordinated in this way to avoid "diversion" of equipment to the "wrong" places. It was quite common in Ghana for goods such as the JSS equipment to go "missing" or be sold to individual businessmen, instead of being transported to the schools (Ibid.).

Textbooks Supply

As far as the supply of textbooks was concerned, a MOE official[11] explained that the Government of Canada had donated "large quantities" of newsprint which was to be used to print the JSS textbooks. In the opinion of one senior MOE official[7], there was enough newsprint available for the printing of books for the "next several years." He further stated that, to ensure that "effective and sound" teaching was offered in the Junior Secondary Schools, "sufficient quantities" of books and instructional materials had been supplied to each Junior Secondary School.

To implement the MOE policy of making the program "Ghanaian-oriented", i.e. relevant to local needs, it was disclosed by the above official that the JSS books were written by Ghanaians and published by the State Publishing Corporation in Accra. To guarantee a "consistent" supply of books and stationery to the schools, he added that the MOE charged each student from primary one to JSS three a ¢250 annual "book user fee". This amount, he explained, was put into a "revolving fund" which, since 1987, had yielded about ¢500 million as of April, 1990.

To reduce the production cost of books and other stationery for the Junior Secondary Schools, the same official stated that the MOE had directed the JSS books to be "recycled." Therefore, since the books belonged to the school (or the MOE), students were permitted to use them only while at school to assure their safety and good condition. They were not allowed to take them home at the end of the day. Therefore, at the end of each academic year the books which were still in good condition were collected from the students and used by the next class of incoming students. In short, in the opinion of the Ministry of Education, as indicated by the Ministry official[7] interviewed, the supply and distribution of books and equipment to the Junior Secondary Schools faced no problems.

Problems

These claims however, were not substantiated by the JSS teachers interviewed. On the contrary, from the discussions with them it became evident that serious problems plagued the program due to the inadequate production and supply of equipment, resources, and books, as well as the inefficient distribution system.

The teachers interviewed, maintained that the allocation of equipment to each school was "very inadequate." It was impossible, they charged, for 200 or more students in one Junior Secondary School to effectively use one saw, one hammer, one shovel, etc. This untenable situation, coupled with the lack of workshops and vocational teachers, had caused many Junior Secondary Schools to simply "store" their equipment in the school's general office where they often remained unused. The lack of equipment and accompanying frustration were dramatized during an interview, when a JSS headmaster[24] carried his school's entire equipment allocation for about 300 students from the general office in his two hands.

With respect to workshops for practical subjects, at the time of the interviews only thirteen had been established in the entire system (GES, 1990). In Accra district only three workshops had been set up for 390 Junior Secondary Schools having a total enrollment of 69,109 students (GES, 1990). According to a senior GES official[6], 85% of the 150 districts had no workshops. But he gave assurance that plans were being made to establish at least one for each district.

Regarding stationery and textbooks, the teachers interviewed explained that each student was supplied with thirteen exercise books--one for each JSS course. These exercise books were expected to last the entire academic year of 40 weeks. A JSS teacher[15] complained that the exercise books were quickly filled, and most students could not afford to buy new ones. This problem was aggravated by a government decree which banned booksellers from selling JSS books or exercise books on the open market (Ibid.).

On this issue, a senior MOE official[3] explained the decree was an "attempt" to "protect" the student and parent alike from "greedy" booksellers eager to raise the price of such books. Consequently, even if the students had the means to purchase the books, they were unable to do so.

The teachers interviewed also contended that, due to the thinness of the newsprint used in the state printed books, the pages of the books were easily torn. One teacher[25] pointed out that almost half the science books in his class could not be used any longer because so many pages had been torn off. The teacher did not blame the students for this problem but instead faulted the "inferior quality" of the paper used in printing the books (Ibid.). Because of this condition, the teachers believed the recycling policy was "already" failing.

A CRDD official[17] suggested that the policy of "free" books be abandoned to allow students to purchase their own. In his view, the recycling policy greatly hindered student learning in terms of their not being able to complete projects and assignments at home (Ibid.). He reported that the Corporation's printing equipment was "very old" and inefficient, and that the task of producing thousands of books for the numerous Junior Secondary Schools was too cumbersome for the Corporation alone (Ibid.). He thus proposed that the State Publishing Corporation's "monopoly" over the publishing of JSS books be abolished to allow production by private publishers who had proper, "more modern" materials and equipment to publish the books.

Commenting upon the equipment and resources distribution system set up by the Ministry of Education, a JSS headmaster[18] observed that the schools had no funds or means of transportation to convey the equipment from the district depot to the schools. He alleged that, although a work-bench allocated to his school had been at the district depot (which was about 10 miles from the school) since September, 1989, he had no means of transporting it to the school, where it was urgently needed for the practical courses. The school also had no funds to pay for its transportation. In his view the distribution system and the whole implementation strategy was one of "confusion and frustration" created by the JSS officials.

Observations

It was evident from the findings of this research that implementation of the JSS curriculum at the school level faced grave problems in terms of inadequate supply of equipment and resources and an ineffective distribution system. Thus, the realization of the central objective of the program, which was the acquisition of practical skills, seemed to be in jeopardy. The major differentiating feature between the former and the current curriculum, in terms of "relevance", was that the latter was supposed to equip students with employable skills through the practical courses being offered. But student use of a saw or other tools for a minute or less each week could hardly satisfy the objective of skills acquisition. Yet, the realization of this goal was important if the new curriculum was to make any meaningful impact on both students and parents with regard to job opportunities.

According to Havelock and Huberman (1977), when projects are ambitious and the infrastructure is weak, both in the planning and implementation phases, a particular constellation of problems tend to appear. These include insufficiencies and delays, problems of coordination, decision-making and continuity, and problems in social relations (Havelock & Huberman, 1977). According to these writers (Havelock & Huberman, 1977), projects of this type have encountered serious constraints in the way of an inadequate supply of equipment and materials and an ineffective distribution system which appears almost from the beginning and becomes increasingly serious independent of the volume of external assistance (Havelock & Huberman, 1977).

They attributed these problems to: (a) the haste with which the project was implemented; (b) the overstretching of resources and personnel to service a project for which the plan of operation had overestimated the available resources; and (c) impatience on the part of political and ministerial leaders who want to demonstrate results almost immediately (Havelock & Huberman, 1977). The consequent configuration has been that lack of adequate preparation has led to unclear goals and objectives which, in turn, lead to inadequate administrative support. Added to this has been the shortage of requisite materials and equipment resulting in a low rate of implementation in the classroom (Havelock & Huberman, 1977). In this situation teachers tend gradually to return to the old curriculum, simply because their teaching becomes less difficult and less threatening to their image of themselves as successful teachers (Havelock & Huberman, 1977).

Similarly, it appears that, at the planning stage of the JSS program, both the Ministry of Education and GES officials concerned underestimated the magnitude of the problem with respect to supplying equipment and resources. Thus, the number of Junior Secondary Schools and their ever-growing enrollments were not considered. The cost of importing the required equipment and distributing it among the schools was also not fully taken into account. Above all, the adverse effects of inadequate supply of vocational equipment on the program in general were overlooked or disregarded.

Equally threatening was the fact that, since 1987, no maintenance units were established at the national or district levels to repair broken equipment received from the schools. Therefore, as the few pieces of equipment broke down, with no avenue of repair or replacement, the objective of practical teaching and learning of the vocational courses continued to fade into the background of priorities within the Junior Secondary Schools.

The decision to deliver goods directly from the Tema Harbor to the district JSS depots appear to be a prudent step. But in formulating this policy, the officials concerned consciously or unconsciously overlooked the transportation costs involved in conveying the materials from the depot to the school premises. This problem was more pronounced among the rural schools, whose distance from the depots (some were 40-60 miles away), compounded by poor roads and lack of funds for transportation, laid bare the ineffectiveness of this distribution system. Once again, it was the vocational courses which were most likely to be victims of this failure.

In 1963, Nkrumah introduced the policy of book recycling. But by the time he was overthrown in 1966, parents were already buying books for their children because government could no longer finance the increasing costs involved. Though it appeared to help poor parents, the present recycling policy, coupled with the government decree banning the sale of the books on the open market, inhibited both teaching and learning in the schools.

In addition, most schools had no proper storage facilities, which resulted in the books being stolen or damaged. Students could not purchase the books from any other source in the country due to the Government decree, yet very few books existed for use in the schools. This severely limited the amount of independent study students could engage in with the aid of textbooks, a situation which clearly interfered with the amount of learning that took place. This is but another example of poor planning on the part of the MOE officials concerned.

Added to this frustration was the likelihood that the book user fee would be increased over the years, thus further raising the cost of basic education in the country. The policy of basic education being "free and compulsory" and also the "right" of every Ghanaian child was, therefore, very likely to remain rhetoric rather than reality, particularly for the large rural population.

This would be even more marked where the effective exposure of students to vocational subjects was concerned.

Conclusion

An adequate and effective supply of essential equipment to the schools has been a major key to the successful implementation of all vocational programs. Hence, the situation in Ghana, regarding such supplies, threatened both the achievement of stated goals and the very survival of the JSS program as a diversified curriculum innovation. Further, if equipment, resources, and teachers were in short supply at the basic education level, they would be lacking also at the Senior Secondary level.

FINANCING

One of the principal factors contributing to the successful implementation of educational innovations is financing. Availability of sufficient funds facilitates the provision of such required inputs as equipment and resources, transportation, manpower, and salaries. Foreign aid, or external funding, often plays a prominent role in the implementation of educational programs in the LDCs, including Ghana, because internal financing of such innovations has been very limited due to a low GNP and high rates of external debts (Africa Report, Nov., 1987). Dependence on external funding has been particularly marked with the introduction of vocational programs because the LDCs have been unable to finance the expensive equipment and materials, repairs, additional manpower, and salaries involved.

With regard to the JSS program, the Ministry of Education document[1] indicates that three main groups, including the central government, local communities, and external aid agencies, were involved in its financing. The role of both the government and communities has already been discussed under the Goals section of chapter six. External aid will now be considered.

According to the MOE document (MOE, 1990) the external funding agencies involved were the World Bank, OPEC Fund, UNDP, Overseas Development Association (ODA), the Norwegian Government and the Swedish International Development Authority (SIDA).

In terms of cost, the entire educational reform program, of which the JSS was a part, was estimated at US $463.9 million (Africa Report, Nov-Dec, 1989). With respect to the implementation of the JSS program, the World Bank provided $34.5 million in loan, with an additional $1.5 million provided by UNDP (Europa Yearbook, 1990). Internal financing was expected to reach ¢37.5 billion (West Africa, January, 1987). The Program Management Unit (PMU) of the Ministry of Education was responsible for coordinating the aid funds.

A senior PMU official[31] observed that the JSS program was about "five times" more expensive than the former middle school course. He attributed this to the high cost of equipment, resources, and salaries of the additional teachers recruited for the vocational courses. Yet, the various senior MOE officials interviewed expressed a general consensus that the program faced no financial constraints. In contrast, both the District Assistant Directors and JSS teachers interviewed pointed out that the inadequate supply of equipment and other resources was a "clear sign" that there were financing problems. A JSS headmaster[24] felt this was in part due to the prevailing "harsh" economic conditions in the country, causing the local communities to be unable to fulfill their share of the financial and resource contribution to the program. As stated earlier, a lack of funds had "halted" the construction of JSS buildings in most parts of the rural districts, and those communities which had partially completed the buildings had no funds to furnish them with tables and chairs.

Observations

It seems evident that the financing of the program was highly dependent upon foreign aid contributions, which caused concern for the future of the project. What would happen if such contributions ceased? The current performance of the national economy indicates that continued internal financing of the program would prove to be an insurmountable burden for the government. In 1987, according to World Bank estimates, Ghana's GNP measured at average 1985-1987 prices, was U.S.$5,328m--equivalent to $390 (US) per head. It was estimated that this GNP per head declined, in real terms, at an average rate of 2.0% per year between 1980 and 1987 (Europa Yearbook, 1990). The GDP, measured in constant prices, increased at an average of 1.4% annually in 1965-1985 but declined by 0.7% per year in 1980-1986. The country's external debt stood at U.S. $2,600 million in 1987 (Ibid.) World Development Report, 1990). Additionally, the inability of the local communities to contribute toward the implementation of the JSS program suggested that there would be a quick return to less costly academic courses. This, of course, would defeat the entire purpose of the program. It appears, therefore, that the authorities concerned underestimated the effects of inadequate financing on the implementation of the program.

CHAPTER X

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study reviewed the history of efforts made in Ghana to vocationalize the curriculum of its schools. Subsequent to this review, an in-depth study was made of that country's latest vocationalization attempt through the introduction of the Junior Secondary School program. Based on the history of vocationalization in developing countries, and Ghana in particular, this thesis was predicated on the premise that vocational education programs in Ghana can be successful only if the long-standing problems and obstacles that have thwarted previous vocational undertakings in that country are recognized and adequately addressed and overcome. This suggests that the success of the JSS program demands the complete transformation of the present social, cultural, economic, and political structures in Ghana.

The continued failure of vocational education in Ghana to this time can be generally attributed to the following reasons: (1) the curriculum changes introduced are insufficient and ineffective to achieve the range of goals set for these programs; (2) the authorities have believed that vocationalization itself could effect the desired socio-economic changes; (3) the theoretical and philosophical reasons supporting vocational education fail to consider the controversy surrounding the relationship between education and development, as well as its role in the job market; (4) the cultural conception (i.e. value and status) and the socio-economic structural reward system (i.e. income and social mobility) associated with vocational education by parents, students, teachers, education authorities, and decision-makers are low; and (5) frequently inadequate provision is made for the implementation of these programs.

The findings and recommendations regarding the implementation of vocational education presented in this chapter are based upon the investigation of the Junior Secondary School Program.

VOCATIONAL EDUCATION IN THE COLONIAL PERIOD

The study has shown that a fundamental reason underlying vocationalization of education in colonial Ghana has been the need to integrate school and community in order to help improve the socio-economic condition of the people. It has been a longstanding belief that knowledge, skills and values which students would acquire from vocational courses will be gradually diffused through the communities. In other words, if school leavers were to have some vocational education they would become change agents within a community development process that draws on what they have learned.

Second, since vocationalization is expected to provide the majority of students with improved "relevant" skills related to traditional occupations, it would better prepare them to be reabsorbed into the community as productive individuals. Related to this is the hope that it will lower their occupational aspirations to more "realistic" levels.

The introduction and expansion of European formal education in Ghana (as well as in the other African colonies) served the implicit purpose of preparing the local population to occupy a few positions at the lower levels of the occupational hierarchy within the European controlled sector of the economy. Hence, the educational facilities provided by the colonial government were very limited since its main objective was not to educate the population but rather to exploit the wealth of the colony. The type of education offered was also calculated to spread the doctrines of Christianity among Africans. This is evident in the vigorous participation of missionaries in the expansion of education during this period. Some religious education was considered helpful in pacifying the masses and convincing them to accept their "ordained" place at the lowest levels of the social and occupational hierarchy.

Since the colonial period, however, education has been seen by African parents as highly important for their children. For the majority of parents, it offers the greatest opportunity for an improved living standard within the society. It continues to be widely perceived that European formal education leads to the acquisition of modern sector jobs providing higher remunerations than those available in the rural sector of the economy. Such education also has led to a higher social status. This attitude has resulted in an increased demand for this "academic" type of education, for this is considered to be the best form of "vocational" preparation. Unfortunately, as the demands for modern sector jobs gradually were met and the number of "educated" individuals increased, unemployment among their ranks has become a feature of these societies due to "overproduction" of school graduates. They soon began to outnumber the limited number of junior positions that were open to them in the small modern sector of the economy. In an effort to remedy this situation, a vocational curriculum was introduced to impart knowledge which would be more practical for the students' and society's needs.

Between 1847 and 1950 attempts were made to vocationalize the curriculum of the schools in the Gold Coast following the initial educational proposals advanced for the British colonies by the Privy Council in 1847. The educational blueprint for the "Colored Races of the Empire" was followed by reports from the Advisory Committee of the Colonial Office in 1925 and 1935, subsequent to the publication of the Phelps-Stokes Report of 1922 and 1924. The proposals they presented focussed on integrating the school and the traditional occupations and lifestyles of Africans. However, the efforts to vocationalize the Gold coast curriculum failed because the colonizer made incorrect assumptions regarding the educational and occupational aspirations of the people.

They had incorrectly assumed that because the country's economy was basically agrarian the teaching of agriculture in schools was certain to induce students to return to the land instead of aspiring toward public sector jobs. They had not taken into consideration the Africans' opinion that the rewards offered by academic as opposed to vocational education were far greater. These points were well illustrated in Foster's 1965 Study entitled Education and Social Change in Ghana.

Futhermore, the colonizer failed to realize that the destitute socio-economic lifestyle of the rural areas continued despite the fact that cash crops were cultivated in these areas. Students, therefore, were reluctant to return to such an impoverished environment no matter how improved were the agricultural knowledge and skills they had acquired in school. Finally, although the goals of this vocational education appeared "relevant", the schools were not well equipped and in some cases unprepared to implement such programs. The lack of a clear definition of vocational education, little government support, insufficient equipment and resources, lack of qualified vocational teachers, and insufficient financing greatly contributed to the failure of these early vocational education programs in Ghana.

CONTINUED EFFORTS AT VOCATIONALIZING EDUCATION IN THE GOLD COAST

Following the Privy Council recommendations (1847), which aimed at vocationalizing education for the "Colored Races of the British Empire", the missionaries in Ghana established model farms at each of their settlements. The students' work on the farms was closely related to instruction in the classroom with the aim of preparing students to return to the land after their schooling was over. Industrial training programs were also introduced in the mission schools. These were supplemented by advanced instruction at a central industrial training institute in Accra, which turned out skilled iron workers and carpenters.

Efforts to vocationalize the curriculum of the Gold Coast schools increased between 1920 and the early 1950s, following the recommendations of the Advisory Committee on "Colored education" after the publication of the Phelps-Stokes reports in 1922 and 1924. In 1922 the Governor of the Gold Coast, Gordon Guggisberg, established four junior trade schools designed to meet the growing need for artisans possessing a general education. Similarly, agricultural schools were established at Aburi, Asuansi, Kumasi, and Tarkwa to provide courses for teachers who were to assist in the instruction of agriculture in the public schools. In addition, the teacher college curriculum was diversified to include agricultural courses since teachers were expected to teach agriculture to both students and to community members in the mass education programs. Unfortunately, the vocationalizing efforts during this period also failed due to implementation problems and political-economic factors similar to those which thwarted earlier attempts.

VOCATIONAL EDUCATION IN POST-COLONIAL GHANA

Despite the unsuccessful attempts to vocationalize the school curriculum in colonial Ghana, the post-colonial Government continued on this course in the pursuit of similar goals. In recent years this has been evidenced in the introduction of the Continuation School Project (1969-1976) and the Junior Secondary School Program (1974-present). These latest efforts were launched because academic education is still not considered suitable for all students, especially those at the post-primary level.

Vocational education is once again considered necessary, therefore, since it promises to provide a more practical, useful, and productive education system that will not only render students more employable after graduation but also enhance the country's return on educational investment. The commonly-held expectation is that the returns on such investment will take the form of graduate employment, diversification of services, increased productivity overall and socio-economic growth throughout the society.

The drive to vocationalize education in LDC schools was accelerated by the international call in the 1960s for such an emphasis in schools, as expressed by the resolutions resulting from the Addis Ababa Conference held in 1961. Predicated on the human capital theory, these resolutions encountered both advocates and critics of vocational education. While advocates like Balogh and Dumont argue that the lack of vocational subjects in the school curriculum has been the cause of unemployment among school graduates, critics like Foster and Bacchus contend that persistent and growing unemployment has been rather the result of stagnant economies and a host of other problems associated with underdevelopment rather than due to prevalence of academic rather than vocational programs in the schools.

Despite this ongoing debate the "relevance" of vocational education argument presented by the advocates has appealed to both aid agencies and the development banks, particularly the World Bank. The period between 1960 and the early 1970s, therefore, witnessed greater support and funding by external agencies for the inclusion of vocational courses in LDC schools.

Ghana, along with other LDCs, was also influenced by the dominant educational philosophies of the 1960s. The philosophies of Pragmatism, Populism, and Socialism in particular, promote a general education that includes both academic and practical courses in order to prepare "well-rounded" persons who can assist in the progressive transformation of society. Those who want to include vocational courses in the curriculum therefore have found philosophical support for this measure.

In addition to having philosophical support for the changes they are promoting, proponents of vocational education in elementary and secondary schools are bolstered by the theoretical suppositions of Functionalism and Human Capital Theory. Functionalism posits that vocational education in schools furthers the egalitarian ethic because each student has equal opportunity to excel in his or her chosen field (academic or vocational). Moreover, it is seen to allocate individuals to appropriate jobs according to their interests and abilities.

The Human Capital Theory, developed within the Functional paradigm, argues that investment in human capital through formal education produces the knowledge and skills which would yield reasonable economic returns in the form of increased earnings and labor productivity at both the private (individual) and national levels. Vocational education in schools is therefore perceived as a potential tool for the production of middle-level labor power needs.

Despite its projected "relevance", historically the practical implementation of vocational education in Ghana, as in many other LDCs, has so far been unsuccessful due to a variety of socio-economic and educational problems identified earlier. This has also been the case in recent years with the implementation of the Continuation School Project. Nevertheless, the Government of Ghana proceeded to implement its Junior Secondary School Program beginning in the early 1970s. A major purpose of this study, therefore, is an assessment of the effectiveness of this program.

The Junior Secondary School Program

Introduced in 1974 as an experimental educational project in 118 schools, the Junior Secondary School Program (a 3-year lower secondary course) was made an integral part of Ghana's "free" basic education program in 1987. The JSS curriculum offered both academic and vocational courses in an effort to make the basic education program more "relevant" to students and the society. It was expected to equip students with knowledge and skills required for employment, thus helping to reduce unemployment among basic education graduates. Furthermore, it was accompanied by a reduction in the duration of basic education from 17 years to 12 years. However, as this study has shown, the nationwide implementation of the JSS program has been undermined by socio-economic, political, and educational problems.

METHODOLOGY

Fieldwork was conducted at the Ministry of Education headquarters in Accra, Ghana. Data collection for the study included an examination of locally available documents, secondary data sources including publications, magazines (e.g. West Africa Magazine), journals, graduate theses, books, and library resources from the Universities of Alberta, London (England) and Cape Coast (Ghana) respectively. These were supplemented by interviews conducted at the Ministry of Education, Ghana Education Service, the National Teacher Training Council, the Ministry of Labor and Social Welfare, and the Ministry of Local Government offices in Accra. The Regional Education offices in Accra and Kumasi were also included, as well as the District Education Centers of Achimota, Mataheko, Labadi, Amasaman, Tema, Konongo, Juaso and Agogo. In addition, JSS headmasters and teachers as well as training college principals provided interviews to shed light on school-level implementation of the program and the training of JSS teachers.

The subjects interviewed, therefore, included Government officials including the Deputy Secretary for Education, the Director-General of the Ghana Education Service, Ministry of Education and Ghana Education Service departmental heads, curriculum development officials, National Teacher Training Council officials, and other officials of the Ministry of Labor and Social Welfare and the Ministry of Local Government. Selected Directors, Regional Directors, District Assistant Directors, and District JSS Coordinators were also interviewed. In addition, the researcher had discussions with two teacher training college principals and six JSS headmasters and their teachers. Further information was gathered through classroom observation carried out in three schools that were visited by the researcher.

Data collection in Ghana proved to be extremely difficult due to the restrictive measures decreed by the country's military government, the PNDC, concerning access to information about the implementation of the JSS program. The political climate, therefore, prohibited access to certain important documents, particularly those pertaining to financing. This tense atmosphere was also responsible for certain pieces of information about the program being kept from the researcher during interviews, because the respondents feared government reprisals. However, in spite of such complications, it was possible to contact many who were "reachable", who represented a fair sample of those directly involved in the implementation of the JSS program at the national, regional, district, and school levels. In addition, through personal friends and "contacts" made at the Ministry of Education and Ghana Education Service, some of the documents that were initially kept from the researcher were eventually made available.

To supplement the data collected, the researcher was compelled to use many secondary sources which, in some cases, consisted of estimated figures and not well-organized data. Added to these problems were time and financial constraints which forced the researcher to abandon lengthier, expensive trips to several remote rural Junior Secondary Schools where other insights regarding the implementation of the program may have been available.

SUMMARY OF FINDINGS AND CONCLUSIONS IN RELATION TO THE JUNIOR SECONDARY SCHOOL PROGRAM

The findings derived from this study of the implementation of the Junior Secondary School Program confirm the writer's fundamental premise: that, unless the problems associated with vocational education and the factors contributing to its success or failure are better understood, efforts to vocationalize the curriculum to achieve broad socio-economic changes in Ghana (and in many other LDCs) will continue to fail. This means that the social, economic, political and educational problems cannot be ignored if the goals of vocationalizing education are to be achieved. Second, this research found that the goals of the JSS program were too broad and unrealistic, making them unachievable in practical terms. It has proven to be impossible to improve the standard of education, increase educational opportunities, improve the content of the educational programs, reduce the cost of education, and achieve individual and national economic growth through the JSS program alone. Like their predecessors of the colonial period the government, policymakers, and educational authorities continue to assume that the socio-economic problems plaguing the country are due in large measure to an academic school curriculum that is irrelevant to the needs of the individual, the community, and the nation as a whole. Thus, curriculum change in the form of vocational education continues to be perceived as the solution to Ghana's vast socio-economic problems. As a result of vocationalization, it has been assumed, the job market can eventually absorb and utilize the knowledge and skills acquired from such an education. However, in the context of the slowly emerging modern sector, this has proven to be not possible. Additionally, those who receive an education continue to not want to return to the traditional sector and its attendant low incomes.

Third, like other vocational projects, the JSS program lacked clear definition. That is, while the GES insisted the program was pre-vocational, the MOE rejected this claim even though one of the MOE publications referred to it as pre-vocational. The implication, therefore, is that anticipated outcomes from the JSS curriculum were unclear, from the beginning, even to the two main educational bodies which were responsible for its implementation.

Fourth, a wide discrepancy was found to exist between the goal statements of the JSS program and efforts made toward their implementation. While the educational authorities vehemently expounded the "relevance" of the program to the people, those involved failed to provide the implementers with the tools necessary to achieve that relevance. It would thus appear that authorities had little or no confidence in the JSS program as a vocational education project. And, launched without consideration or investigation of the people's educational and occupational aspirations, it would appear that the program was a political instrument of the government, designed to diffuse the tensions and dissensions of an unhappy electorate that had grown increasingly dissatisfied as a result of growing socio-economic problems and, in particular, unemployment among school graduates.

Fifth, like other vocational education programs, the JSS program, was implemented using ill-defined, inflexible, ineffective, and disorganized strategies, and inadequate initial preparation. These gave rise to misunderstandings, frustrations, unclear role definitions, tensions, and lack of cooperation among the various actors involved. While authorities expended much effort in convincing the general public of the "importance" of the program, it would appear that they made little attempt to put similar effort into the careful design of strategies capable of dealing with both expected and unexpected problems, thus ensuring the program's successful implementation.

Related to the above, the JSS program lacked well-designed evaluation and monitoring strategies. For instance, it was discovered that no direct contact or communication system existed between classroom teachers and the curriculum designers (CRDD), due to a shortage of personnel at the CRDD. Schools were not provided with any evaluation guidelines; yet authorities expected them to evaluate and report on the progress of their programs. Even then, such reports were only acted upon when they were compatible with the expectations of central government regarding vocational education, rather than when they addressed the needs or desires of the schools. It was obvious, therefore, that authorities attached no great importance to the evaluation of vocational programs conducted by school personnel. In addition, some courses (e.g. French and drama) lacked a syllabus. Above all, within the CRDD there was no agricultural unit where members could supervise the instructional process in relation to the agricultural component of the curriculum.

Sixth, this study of the implementation of the JSS program revealed several problems existing at the school level which undermined the success of this as well as previous vocational programs. These include a lack of equipment and resources, insufficient and improperly equipped workshops, a dearth of qualified vocational teachers, an over-abundance of courses to be taught/learned, discrepancies between level of student comprehension and course content, an increased teacher workload, overly-demanding timetables, headmasters who serve as full-time teachers as well as administrators, and poorly furnished classrooms. In addition, it appeared that vocational courses were often allocated fewer periods on the timetable than academic courses. Hence, while a "balanced" curriculum comprised of academic and vocational courses was to result from the JSS program, priority continued to be accorded to the study of academic courses. This was further evidenced by the fact that the final year JSS examinations were designed to evaluate the academic rather than vocational component of the curriculum. These conditions indicate that schools failed to realize or embrace the fundamental goal of this vocationalization effort, which was to equip students with the practical skills required for employment.

Seventh, it was found that the JSS program severely limited access to higher education. While under the former system all middle school graduates had access to further education, with the JSSP only Senior Secondary School graduates could advance to higher education. Since the small number of Senior Secondary Schools permitted entry to a mere 30% of the JSS graduates, the majority of these graduates had no opportunity to pursue further education. Higher education, then, was more accessible to children of the elite and the wealthy because many of them attended private primary and Junior Secondary schools which offered a more academic curriculum and had a higher level of financing and resource allocation than the public schools. They also had the advantage of having educated parents who not only were able to help them in their academic work but also had "connections" with authorities who could assist them in securing a placement in one of the few Senior Secondary schools. In contrast, less affluent students, particularly those of the rural areas, had to contend with regional disparities in terms of school equipment and resource allocations, the distribution of trained teachers and financing. These added to their already disadvantaged position. This situation, therefore, rendered the egalitarian goal of the JSS program unattainable.

The problems associated with access to higher education through the JSS program also indicated two other things. First, it appears that the majority of JSS students preferred to concentrate on passing the academic rather than the vocational courses of the JSS curriculum so they would qualify for the Senior Secondary program. Second, the greater number of "basic education" graduates had no alternative but to join the labor force to compete for the limited number of jobs. Since the economy was not expanding rapidly enough to create many new jobs, unemployment among these graduates was increasing. This trend supports research indicating that vocational education has often increased rather than decreased unemployment among school graduates.

Eighth, while the National Teacher Training Council believed the number of teacher colleges in the country was adequate to produce teachers for the Junior Secondary Schools, college principals considered the number grossly inadequate, given the rapidly expanding number of Junior Secondary schools with their large enrollments. Furthermore, since the teacher colleges were ill-equipped to produce qualified vocational teachers for the schools, the latter received ill-prepared teachers who, in turn, produced ill-prepared vocational students.

Ninth, the general financing of the JSS program was found to be nearly five times more expensive than the former academic middle school program. This higher cost gives credence to the critics' argument that vocational education could seriously hamper growth in other sectors of the economy, since funds originally intended for these sectors had to be diverted to vocationalizing the school curriculum. Further, because the goals of vocationalizing education have never been achieved since colonial times, critics (including those at the World Bank) argue that investment in such education does not produce a reasonable rate of return and is thus a waste of limited funds and resources. Because these programs largely have depended upon external financing, the possibility of their being maintained in the future is also questionable since neither the national economy nor local communities will be able to sustain financing should such aid be withdrawn.

Finally, it was observed that the provision of vocational skills (particularly pre-vocational skills) by the schools was not economically rewarding to the individual, the community, or the nation, since these skills are seldom utilized in the economy. It would appear, therefore, that school graduates will continue to drift to the urban centers in search of "office" jobs. This supports the critics' argument that the introduction of agriculture in the school curriculum would not guarantee a willingness on the part of vocationally-trained students to return to the land.

Interestingly enough, however, the study revealed that present inflationary trends in the national economy have resulted in an unusual increase in the cost of living, particularly in the urban areas. Consequently, white collar workers in this sector of the economy are either quitting their jobs to take up farming or are investing in agricultural projects to supplement their incomes. The high cost of urban living, added to the acute scarcity of jobs in this sector, appears to be greatly altering students' occupational aspirations such that they are more willing to seek rural jobs, particularly those associated with specific agricultural projects such as pineapple or poultry farming. This development suggests that it is increasingly possible to interest school graduates in rural employment if some real incentives were introduced into the vast rural economy. In other words, despite the fact that the goals of vocational education have not as yet been achieved, present economic conditions in Ghana have generated an interest in alternative ways of procuring an income. This suggests that, in Ghana, conditions might be forming that are more receptive to a form of vocational education which could meet the emerging economic and social needs of student and society.

RECOMMENDATIONS

In view of the findings of this study the following recommendations have been formulated with respect to vocational education in Ghana for education authorities to consider.

(1) There is a need to address the cultural attitude (i.e. the perceived reward structure) and the socio-economic structure (i.e. the actual reward structure, in terms of income and status), which accord higher rewards to academic rather than vocational education. Parents, students, teachers, education authorities, and policymakers possess a pre-conceived belief that vocational training is appropriate education for the poor, illiterate rural masses, while academic education is suitable for the urban, elite, and wealthy members of society. To help redress this psychological conditioning toward vocational education, it is suggested that the government formulate programs to educate the general populace about the potential benefits of vocational education. In support of this, the government also needs to devise and establish a new reward structure within the country to equalize the opportunities of both academic and vocational graduates.

(2) Since the provision of education is, to a large degree, the responsibility of the central government, its full economic and political support and its active participation in the

implementation of vocational programs are crucial to their success. In other words, the political context of the society is essential to the successful implementation of vocational programs.

(3) There is a need to develop a clear and consistent definition of vocational education. This would assist in formulating more realistic program objectives which, in turn, would help in developing appropriate strategies for the successful implementation of such programs.

(4) Since, historically the economy has been primarily agrarian, accounting for nearly 50% of the GDP and GNP, priority should be given to the development of the large rural agricultural sector. Investment in specific agricultural and local industrial occupations would create job opportunities for school graduates, particularly those in the rural areas. This would help stem the urban drift. The government also should allow the prices of agricultural and rural industrial commodities to find their own levels so that incomes in both rural and urban sectors would be at or nearly on par. Since the cost of urban living is now so expensive, these policies would attract more graduates to the rural areas, offer more alternatives to job seekers, create a respect for all types of work, and help raise the standard of living throughout the entire country. Constructive developments in the rural sector would assist in determining the type and nature of vocational

programs required for national, community, and individual growth.

(5) Due to the high cost associated with large-scale vocational programs (particularly pre-vocational programs), consideration should be given to establishing regional or district center-based post-primary vocational programs to admit and train basic education graduates. These programs should be non-residential to reduce costs and to focus on specific regional or district occupations, thus developing skills more likely to be needed by local communities. This strategy could help, first of all, to clearly define the nature, scope, and content of the program to alleviate ambiguities. Second, it could assist in modifying the goals of vocational programs, making them more realistic and attainable. Third, it would ensure an adequate and sustainable supply of personnel, equipment, and resources and the effective use of such resources. Fourth, more centers would be established in the rural areas of Ghana instead of being concentrated mainly in the larger towns. Finally, providing regional or district center-based post-primary vocational training would ensure that all students would have completed a basic education in literacy and numeracy skills before being admitted to vocational skill training.

(6) Sufficient attention should be given to the planning and organization of vocational programs and to the training of

personnel before actual implementation of such programs. This would help to develop effective administrative and management systems to supervise the implementation at both the national, regional, district, and school levels. Evaluation and monitoring programs should then be more effectively coordinated and able to be sustained throughout the implementation process. More importantly, the implementation structure should be made flexible enough to permit a two-way communication system which would accommodate the views and suggestions of both top management and all other actors involved, particularly the classroom teachers. Flexibility in the structure would also create the atmosphere needed for increased commitment and cooperation among the various participants in the project, which is necessary for the successful implementation of curriculum reforms. Even the communities themselves need to be consulted on all proposed vocational projects to ensure their acceptance before implementation commenced.

(7) The Ministry of Labor should establish contacts with both public sector and private sector employers and encourage apprenticeships for pre-vocational graduates.

(8) Local tribal chiefs should also be encouraged to release land for the establishment of farms within the local communities to help absorb pre-vocational graduates. This would, in turn, bolster the financial vitality of these communities.

(9) Loans should be made available to graduates of regional or district vocational schools to help them embark upon individual or group projects. Parents could underwrite or co-sign such loans.

(10) Inter-regional as well as international exports of agricultural and local industrial goods should be encouraged to assist in the creation of markets for these graduates.

RESEARCH IMPLICATIONS

The findings raised a number of issues for further research. Among these are:

1. There is a need for more research into the relationship between vocational education and development.
2. The development of an effective method to better and more vigorously test prevailing suppositions and theories/ideologies underpinning vocational education is necessary.
3. In view of the changing economic realities and their effects on white collar workers (white collar jobs not being viewed as being as attractive as they used to be), authorities should explore new forms of vocational training since Ghanaians now appear to be open to alternative occupations for a livelihood.

FOOTNOTES

1 Ministry of Education document, JSS Implementation Phase II, 1987.

2 Ministry of Education publication, Things You Need to Know About the JSS Program, 1987, Accra.

3 Ministry of Education official No.1.

4 Ministry of Education official No.2.

5 Ministry of Education document, New Structure and Content of Education in Ghana, Accra, 1974.

6 Ghana Education Service official No. 1.

7 Ministry of Education official No. 3.

8 Ministry of Local Government official.

9 Ministry of Education official No. 4.

10 NPCISR member No. 1.

11 Ghana Education Service official No. 2.

12 District Assistant Director No. 1.

13 District Assistant Director No. 2.

14 JSS teacher No. 1.

15 JSS teacher No. 2.

16 District JSS coordinator No. 1.

17 CRDD official No. 1.

18 CRDD official No. 2.

19 JSS headmaster No. 1.

20 Vocational teacher No. 1.

21 French language teacher No. 1.

22 Assistant headmaster No. 1.

23 Logistics unit official.

24 JSS headmaster No. 2.

25 JSS teacher No. 3.

26 Daily Graphic Newspaper, Dec. 20, 1990.

27 NTTC official No. 1.

28 NTTC document. The New Teacher Education Program, 1987.

29a Training College principal No. 1.

29b Training College principal No. 2.

30 Student-teacher.

31 Program Management Unit official.

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APPENDIX A

INTERVIEW GUIDE A

Interview Guide A was used to collect data from the following respondents in Ghana, who were most familiar with the rationale and goals of the Junior Secondary School program.

1. The Deputy Secretary for School Education - Ministry of Education.
2. The Director-General - Ghana Education Service.
3. JSS Officials - MOE & GES.
4. Regional Directors - GES.
5. District Assistant Directors - GES.
6. District Coordinators.

INTERVIEW GUIDE A

A.1 What factors led to the introduction of the JSS program?

A.2 What are the official goals of the Program?

A.3 Is the JSS program a pre-vocational education? If no, what is it?

A.4 In you opinion, what are the advantages/disadvantages of the JSS program compared with the former middle school course?

A.5 How is the implementation of the JSS program being carried out at the national, regional, district and school levels?

A.6 What are the responsibilities of the various officers involved in the implementation of the program?

A.7 What problems (if any) have so far been encountered with the implementation strategy and how are they being solved?

A.8 What is the total number of Junior Secondary Schools in the country? What is their enrollment?

A.9 How many teachers (academic and vocational) are there in the Junior Secondary Schools?

A.10 How are vocational teachers recruited for the Junior Secondary Schools?

A.11 What is the minimum salary of a trained JSS teacher and a JSS vocational instructor? If there are pay differentials between the two categories of teachers, Why is this the case?

A.12 Who designed the JSS curriculum? What Problems (if any) do you have with the curriculum and how are they being solved?

A.13 What type of vocational equipment is used in the Junior Secondary Schools? Were these imported,from which country? What was the total or unit cost of the vocational equipment?

A.14 How are equipment and resources distributed among the Junior Secondary Schools? Do you have any problems with the distribution system? If yes, what are they and how are they being solved?

A.15 What is the nature of the final year JSS examinations? How will the examinations be conducted?

A.16 What percentage of the JSS graduates is expected to move into the Senior Secondary level each year? What is the minimum qualifying grade? How many Senior Secondary Schools are there in the country at present? Are there any plans to increase this number in the near future?

A.17 Are there any central government plans directed at expanding the economy to absorb those JSS graduates unable to advance to the Senior Secondary level? If not, why?

A.18 How is the JSS program being financed? Are there any external agencies involved in the financing? If so, who are they and what is the total contribution of each agency?

A.19 What is the estimated total cost of implementing the program, and how much of this cost is being borne by the central government?

A.20 What is the total expenditure incurred on the program since 1987?

A.21 Do you think the JSSP is more or less expensive to finance than the former middle school course? If more expensive, what do you think are the contributing factors?

A.22 What other comments or suggestions do you have concerning the implementation of the JSS program which have not been covered in this interview?

APPENDIX B

INTERVIEW GUIDE B

Interview Guide B was used to collect data from the following respondents in Ghana responsible for employing school-leavers and keeping employment/unemployment records.

1. Director, Department of Employment - Ministry of Labour and Social Welfare.
2. Deputy Director, Department of Employment.

INTERVIEW GUIDE B

B.1 What have been the employment/unemployment rates (in figures) of the country since 1980?

B.2 How many job positions are currently available for job seekers?

B.3 How many school graduates join the labor force each year?

B.4 What type of work do school-leavers look for and why?

B.5 The new JSSP, it is said, will equip students with pre-vocational skills. Do you think this will provide them with job opportunities in the economy? If yes, which sector of the economy and what kind of jobs?

B.6 In you opinion, are school-leavers, interested in rural jobs such as farming? If not, what do you think are the reasons for this? Do you think the JSSP could alter this attitude by providing agricultural courses in the schools?

B.7 Are there any plans by the government or your department to develop rural programs aimed at absorbing the JSS graduates? If yes, what are these plans and what type of jobs would be involved?

B.8 How would you like to see unemployment among school-leavers solved?

B.9 What other comments or suggestions do you have concerning employment/unemployment and the JSSP which have not been covered by this interview?

APPENDIX C

INTERVIEW GUIDE C

Interview Guide C was used to collect data from the following respondents in Ghana responsible for designing, monitoring and evaluating the JSS curriculum.

1. Director - Curriculum Research and Development Division (CRDD).
2. Deputy Director - CRDD.
3. Subject Officials - CRDD.
4. Evaluators - CRDD.

INTERVIEW GUIDE C

C.1 What is the JSS program? What are its goals?

C.2 What is the structure and composition of the CRDD?

C.3 Did the CRDD consult with other institutions, such as the National Teacher Training Council (NTTC), in the planning of the JSS curriculum? If not, why?

C.4 What is the nature of the JSS curriculum?

C.5 Are there any regional or district level differences in the curriculum? If so, why, and what are the differences? What do you think are the effects of these differences on the school level implementation of the curriculum?

C.6 What implementation strategy has the CRDD adopted regarding evaluation and monitoring of the curriculum in the schools?

C.7 How many courses form the JSS curriculum? What are they and which ones form the vocational courses?

C.8 What types of equipment and resources are demanded by the curriculum and how are they distributed among the schools? Do you find any problems with your distribution system? If so, what are these problems and how are they being solved?

C.9 How will the final year JSS students be examined? What certification will be awarded?

C.10 What do you think are the advantages/disadvantages of the JSS curriculum compared with the former middle school curriculum?

C.11 In terms of financing, do you think the JSSP is more or less expensive than the former middle school course (i.e. cost of curriculum materials and equipment)? If more expensive, what makes it so?

C.12 How do you think the cost of implementing the JSSP could be reduced with regard to curriculum requirements?

C.13 What have been the major problems facing the CRDD with the implementation of the JSS curriculum since 1987? How do you think such problems could be solved?

C.14 What other comments or suggestions do you have concerning the general implementation of the JSSP, particularly the curriculum, which have not been covered by this interview?

APPENDIX D

INTERVIEW GUIDE D

Interview Guide D was used to collect data from the following respondents in Ghana responsible for producing teachers for the primary and junior secondary schools.

1. The Chairman - National Teacher Training Council.

2. Deputy Chairman - NTTC.

3. Teacher Training College Principals.

4. Student-teachers.

INTERVIEW GUIDE D

D.1 What is the total number of teacher training colleges in the country and their enrollment? Do you think the number of colleges is adequate in terms of teacher development and supply for the Junior Secondary Schools? If inadequate, how is the situation affecting implementation of the Program in the schools?

D.2 Of the total number of teacher colleges in the country, how many are producing vocational teachers for the Junior Secondary Schools? What is their total enrollment?

D.3 What existing facilities, such as resources, teacher-trainers, fund, etc., do the training colleges have in their efforts to produce teachers for the Junior Secondary Schools?

D.4 Is the teacher training curriculum diversified to include vocational courses studied in the Junior Secondary Schools? If not, why?

D.5 What are the minimum academic/vocational requirements of student-teachers?

D.6 What are the major problems (if any) facing the teacher colleges with regard to training teachers for the Junior Secondary Schools? How are these problems being solved?

D.7 What other comments or suggestions do you have concerning teacher education and the JSS program which have not been covered by this interview?

APPENDIX E

INTERVIEW GUIDE E

Interview Guide E was used to collect data from the following respondents in Ghana responsible for implementing the Junior Secondary curriculum at the school level.

1. Junior Secondary School Headmasters.

2. JSS Teachers.

INTERVIEW GUIDE E

E.1 What do you think are the main objectives of the JSSP? Is it a pre-vocational education?

E.2 Were the headmasters given initial administrative training before the nationwide implementation of the program in 1987? If not, how do you think it has affected implementation of the program in the schools (e.g. you school)?

E.3 What are you comments and suggestions on the subject of administrative training?

E.4 How do headmasters coordinate with the district, regional, and national level administration? What are some of the problems (if any) involved?

E.5 How is the program monitored and evaluated at the school level, and by whom? If evaluation is being conducted by headmasters, have you been trained to do so? If not, what are your comments and suggestions with regard to this issue?

E.6 What type and number of vocational equipment resources have been distributed to your school? Do you think this allocation is adequate? if not, why, and how do you think the problem is affecting the implementation of the vocational component of the JSS curriculum? Have you incurred any problems with the equipment and resources distribution system? If you have, what are these problems and how do you want them solved?

E.7 Which courses comprise the JSS curriculum in your school? Do you have any problems with the national JSS timetable provided by the Ministry of Education? If so, how would you like such problems solved?

E.8 How many teachers do you have on your staff? How many of this number have vocational background?

E.9 What is the nature of the JSS final examinations? Do you have any comments or suggestions about the examination policy effected by the Ministry of Education?

E.10 What has been the annual expenditure of your school since 1987? Have the expenditures been increasing or decreasing? If increasing, what do you think are the main reasons for this?

E.11 Do you find problems with the general financing of the program as a whole and in particular at the school level?

E.12 What are the major problems facing you and your staff in your effort to implement the program in your school?

E.13 What other comments or suggestions do you have regarding the implementation of the JSS program at both the national and the school level?

APPENDIX F

INTERVIEW GUIDE F

Interview Guide F was used for collecting information from the following respondents in Ghana responsible for supervising the decentralization program, including the provision of education in the districts.

1. Director - Ministry of Local Government.
2. Deputy Director - Ministry of Local Government.
3. Chief Public Relations Officer - Ministry of Local Government.

INTERVIEW GUIDE F

F.1 What are the rationales behind the government's decentralization policy?

F.2 How does this policy affect the general provision of basic education in the country, particularly with the implementation of the JSS program?

F.3 Will the district governments receive central government support (e.g. funds, teachers, equipment and resources) in providing basic education for their communities? If yes, what is the annual educational grant allocated to each district?

F.4 What other comments or suggestions do you have concerning the government decentralization policy and the development of education, in particular basic education?

APPENDIX G

July B.E.C.E. 1990
Life Skills
(1 3/4 hours)

THE WEST AFRICAN EXAMINATIONS COUNCIL
GHANA
Basic Education Certificate Examination
LIFE SKILLS

Each question is followed by four options lettered A to D. Find out the correct option for each question and shade in pencil on your answer sheet the answer space which bears the same letter as the option you have chosen. Give only one answer to each question.

1. When planning meals, it is very important to use

   A. carbohydrate food groups.
   B. fatty food groups.
   C. the six food groups.
   D. protective food groups.

2. Liquid diet for sick people should contain plenty of

   A. carbohydrates.
   B. calcium.
   C. proteins.
   D. minerals.

3. Fresh tomatoes are best kept

   A. in a cool place.
   B. in a covered bowl.
   C. on the floor.
   D. in a cupboard.

4. The most important factor to consider when choosing a place for an industry is

   A. land.
   B. capital.
   C. transport.
   D. raw materials.

5. Going to the market with a list of the things to be bought, helps one to

   A. compare prices.
   B. buy wisely.
   C. buy anyhow.
   D. buy cheap things.

6. The simplest method of cooking is

A. baking.
B. boiling.
C. grilling.
D. roasting.

7. A well ventilated room is

A. warm.
B. cold.
C. airy.
D. damp.

8. The commonest cleaning agent is

A. Omo.
B. water.
C. wood ash.
D. Key soap.

9. What is the best way to dispose of rubbish?

A. Throw it behind the house
B. Leave it for animals to eat
C. Bury it in the ground
D. Burn it in the house

10. A thimble is worn when one is

A. stitching with a needle.
B. threading a needle.
C. cleaning a sewing machine.
D. cutting out materials.

SOURCE: Ministry of Education, Accra, July 1990.

July B.E.C.E. 1990
CALABASH ART
(1 3/4 hours)

THE WEST AFRICAN EXAMINATIONS COUNCIL
GHANA
Basic Education Certificate Examination
CALABASH ART

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1. Which of the following statements is true?

   A. A gourd is a type of calabash.
   B. A gourd is prepared from a calabash.
   C. A gourd is used to make a calabash.
   D. A gourd is another name for calabash.

2. When gourds are joined together to make an object it is known as

   A. gourd designing.
   B. gourd construction.
   C. gourd preparation.
   D. gourd decoration.

3. One suitable use of a calabash is to

   A. decorate a room with it.
   B. keep pens and pencils in it.
   C. keep snuff in it.
   D. wear it on the head.

4. Which of the following is a musical instrument made with gourds?

   A. Gong-gong
   B. Flute
   C. Guitar
   D. Xylophone

5. A farmer would use a gourd for

   A. keeping tools.
   B. harvesting crops.
   C. carrying foodstuffs.
   D. storing water.

6. When a calabash is cracked, it

   A. must not be used anymore.
   B. should be used for decoration.
   C. can be repaired by stitching.
   D. should be repaired by gluing.

7. When we serve our visitors with water in calabashes it is a way of

   A. saying thank you to our visitors.
   B. remembering our ancestors.
   C. maintaining our culture.
   D. greeting out visitors.

8. Calabash work will continue in Ghana if only we would

   A. grow more gourds.
   B. decorate our calabashes.
   C. repair cracked calabashes.
   D. sell more gourds to other countries.

9. Which of the following is a tool for drawing lines on a calabash?

   A. Stencil
   B. Sprayer
   C. Nail
   D. Saw

10. A scraping tool must have a

    A. pointed end.
    B. broad end.
    C. round end.
    D. soft end.

SOURCE: Ministry of Education, July, 1990, Accra.

APPENDIX H

REPUBLIC OF GHANA

Ministry of Education
Ministry Branch Post Office
P. O. Box M. 45
Accra

In case of reply the number and date of this letter should be quoted

My Ref No. MOE/PNDC/23

Your Ref No. ....

19th March, 1990

TO WHOM IT MAY CONCERN

This is to introduce Mr. Clemente Abrokwa who is currently studying for his doctoral degree at the Department of Educational Foundations of the University of Alberta, Canada.

He has obtained approval to conduct field research on Analysis and Evaluation of the Junior Secondary School Programme.

We expect that you will give every assistance required.

VIDA YEBOAH (MRS.)
DEPUTY SECRETARY FOR SCHOOL EDUCATION
for: PNDC SECRETARY FOR EDUCATION.